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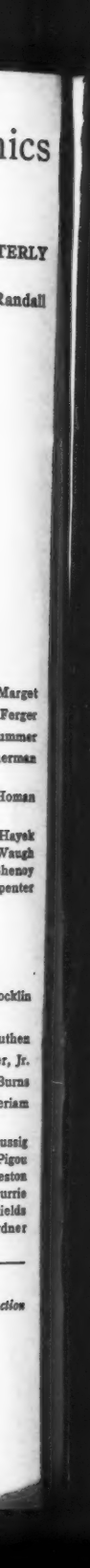

THE
QUARTERLY JOURNAL
OF
ECONOMICS

MAY, 1933

"THE NATURE AND SIGNIFICANCE OF ECONOMIC SCIENCE" IN RECENT DISCUSSION

SUMMARY

I. Suffocation by analytical definition, 377.— II. Rationality and the Individualist Exchange Economy, 387.— III. Scientific Precision and "the" Stationary State, 391.— IV. Pseudo-Positivism and the doctrine of "the logical gap," 401.— V. The Mecca of twentieth century economics, 408.

"... One day in looking over his books he discovered a remarkable law. For every item on the credit side an equal item appeared somewhere else on the debit side. 'Ha!' said the Bursar, 'I have discovered one of the great laws controlling the college. It is a perfect and exact law of the real world. Credit must be called plus and debit minus; and so we have the law of conservation of £.s.d. This is the true way to find out things, and there is no limit to what may ultimately be discovered by this scientific method. I will pay no more heed to the superstitions held by some of the Fellows as to a beneficent spirit called the King or evil spirits called the University Commissioners. I have only to go on in this way and I shall succeed in understanding why prices are always going up.'"

The Nature of the Physical World.

I

Professor Lionel Robbins' recent book under the above title is important, not merely because it provides English and American students with an able, scholarly and succinct account of the main tenets of "the Austrian School" (it is Professor Robbins' *credo* as an adherent of that school); but also because it is symptomatic of a general theoretical trend— by no means confined to the strict votaries of this school, and discernible in a number of directions on both sides of the

Atlantic — towards static formalism and an alleged increase in "logical precision." To my mind, there underlies many aspects of this disturbing tendency a direct and unequivocal challenge to the integrity, continuity and further organic development of the true Classical Tradition. From a technical philosophical standpoint, the basic methodology of static formalism has all the marks of extremely acute and agile, but fundamentally unphilosophical, handling of an inherently philosophical problem. From the economic standpoint, it is entitled to extended examination and criticism of a kind here impossible for reasons of space. The most I can do is to put the non-philosophical economist on his guard. For my own and the general reader's convenience, I shall rely for reference purposes almost exclusively upon Professor Robbins' handy exposition; but it is of considerable importance to emphasize at the outset that what I have to say has a very much more general application.

The whole structure of static formalism is reared upon the ancient metaphysical fallacy of exclusion, which is permitted to wreak destruction along the two fundamental channels of future development of the genuine Classical Tradition that has so far reached its highest integration in the work of Marshall: the interrelationships of positive economic science with the other positive human disciplines; and its interrelationships with the normative sciences that deal with philosophical problems of Value.

First, it is somehow assumed that the "analytical" method of "defining" special disciplines in terms of their respective distinctive *attitudes* towards a common "subject-matter" somehow or other justifies a particular science in erecting round itself barbed-wire entanglements which would be thoroly pernicious if erected in the name of a classificatory "definition" in terms of *different* "subject-matters." In other words, tho the material of the sciences cannot be partitioned off into a number of watertight compartments, the sciences themselves can, with the aid of the simple device of "defining" their "attitudes." It is in this way that "economic science" miraculously juggles "psychology" (not to mention

sociology, technology, etc.) over the wall and so obtain its "independence." It is vital for economists to realize that in the case of economic science this segregation by means of "analytical definition" is effected by regarding "economics" as a *purely formal science of implications.* I can only remark at this point that to differentiate the respective "attitudes" of physics and chemistry towards a common "subject-matter" by "defining" the one as the science which deals with matter in terms of its mass and motion in space, and the other as the science which deals with matter in terms of its constitution, is both an analytical definition and one which could not be formulated at all till these sciences became both highly organized and reflectively articulate: yet its collapse into inadequacy is a sure mark of a major constructive advance towards the ultimate unification of knowledge. To this I should perhaps add that the allegedly successful struggle of modern "pure" mathematical physics to become a strictly formal science of implications has at least not obstructed, but would seem to have compelled, the development of specific sub-disciplines, such as physico-chemistry: corresponding, it may be hoped, to the future integral economic sub-disciplines of Economic Psychology, Economic Sociology, and so on.

Secondly, by "defining" economics as "the science which studies human behavior as a relationship between ends and scarce means which have alternative uses"; and by then defining "ends" as "tendencies to conduct which can be defined and understood" (a "definition" of "ends" which, it is imagined, "entirely removes our conception of an 'end' from the realms of the metaphysical"); it is claimed that economics can be made "entirely neutral between ends"—tho it is admitted that "difficulties" (to be disposed of later) "may arise when the formulation is collective." The "may-or-may-not-be-valid" label that is pinned in passing on "the metaphysical conception of a unitary end of conduct" would of course provoke instantaneous and sensitive remark in exclusive philosophical circles — exactly as Professor Robbins himself is shocked by the persistent recrudescence of perverse or ill-informed denials and doubts of the necessary

formal truths of "economics." We are assured, however, that "in economic analysis we are not concerned with these ultimates"— which may mislead some into believing that, after all, no great harm need ensue for economics from a merely metaphysical blunder. But this unphilosophical (not non-philosophical) conception of an atomistic plurality of "ends" is forthwith positively employed to differentiate economics from technology, which — whatever be the truth about metaphysics — has necessarily, it seems, only one "end." This is demonstrated by a brief excursion into "amateur technology." But failure to embark on a more intensive "realistic" examination of the complexities of modern industrial technology (with its systems within systems of "ends") need, of course, not here have proved lethal — given a little imagination — had it not been conjoined with the pellet theory of "ends."

This attempt, attributable to Hans Mayer, to differentiate "economics" as a science whose "ends" are "multiple," is infected with a subtle ambiguity which the reader must at all costs detect and understand if he is to assess the true significance of the "Austrian" position. This ambiguity is the illicit identification of "plurality of ends" with "alternative uses." The neophyte may well be baffled to discover for himself how *any* "solution" of the "economic problem" of adapting scarce means to a multiplicity of atomistic "ends" is either possible or conceivable. It is true that a non-psychological economics is at hand to disperse his perplexities with a ready-made psychological dogma which the disciple dare not question: in the individual or Crusoe "economy," *the problem solves itself* — "conduct is the resultant of conflicting psychological pulls acting within an environment of given material and technical possibilities." (We have here, distinctly stated, the psychological doctrine of an atomistic plurality of psychic ends.) It is also true that any breath-taking doubt at this point concerning the very existence (on such premises) of "the economic problem" must be sternly suppressed until the disciple has been initiated into the mysteries of the Individualist Exchange Economy — to which the

universal truths of "economics" are not, indeed, *confined*, but in application to which they have *"most interest and utility."* (Professor Robbins holds that alike for a Crusoe economy and for a closed Communistic dictatorship, the interaction — by which, however, he *now* means *interpersonal* interaction — of "individual pulls and resistances" through a "mechanism of prices and costs" is "excluded by definition.") But, when we seek to ascertain the ground of this greater "interest and utility"— the reason why transition to the Exchange Economy is not simply transition to an essentially identical, tho much more complicated, "problem" of the kind which solves itself — we discover that the individual atom in the mechanical universe of the Exchange Economy is equipped with something that is denied to Crusoe — a capacity for *rational choice*, and therefore for organizing his conduct in terms of a "unitary end": or, what comes to the same thing in correct metaphysical usage, a *system* of "ends." No longer *need* his conduct be the mere resultant of "conflicting psychological pulls," or (as it is now described) of "uncoördinated impulse." The strictly non-psychological, non-technological, but not quite non-metaphysical mechanics of the Exchange Economy can therefore, we are told, now make it "possible for us"— *as a collocation of atomistic individuals* — "to select a system of ends which are mutually consistent with each other."

Postponing for the moment any further consideration of the mechanical plurality of individual unitary systems of ends in the Exchange Economy, let us assume that the follower of Mayer has already hastily withdrawn his unintentional libel on Crusoe (and Lenin?). We now at once perceive one of those curious, instructive, and — for their victim — intolerable "antitheses" from which even the very acme of agility can never finally free the juggler with a static verbal logic — the profane sunderer of "form" from "substance." For, if it be still maintained that "economics" is *not* confined in its significance to the Individualist Exchange Economy, the meticulously constructed antithesis between "economics," with its "plurality of ends," and "technology," with its

single "end," now dissolves into thin air; and Hans Mayer's frail balloon is irremediably punctured. If, on the other hand, to avoid this catastrophe, the disciple of Mayer retracts on the second point also, manfully confessing that "economics" *is* intrinsically and "by definition" incapable of transcending the limits of the Individualist Exchange Economy, with its mechanical plurality of individual unitary systems of ends — but at this point let us avert our eyes as the Marxian devil closes with him.

I shall assume for the moment that the disciple of Mayer, to escape the carnage, still resolutely refuses to make "economics" co-terminous with the Exchange Economy, and admits that therefore its "end," like the "end" of technology, is — or at least may be — "unitary." (We shall allow him, provisionally, to make this admission without prejudice to the problem of the Exchange Economy, with its "plurality" of individual unitary systems of ends, which we shall consider separately later.) Can he now insulate himself against contact (or rather living intercourse) with technology by means of his other distinction — that of "alternative uses"— which we have disentangled for him from the unfortunate conception of "plurality of ends"? I fear not. I fear that nothing short of the ultimate experience of Conversion to the Living Classical Faith can resolve the painful antitheses that now crowd upon him.

The reader must here sharply recall that for the static formalist "economic theory" is a purely formal science of implications. No distinction between "economics" and "technology" is for him possible, therefore, in terms either of the quality (or universality) of the "end," or of the material substratum which is the means.

It is intrinsic to the static formalist's whole position that the nature of the end remain unspecified: any attempt to specify its nature would, "from the point of view of Economic Science," be "sheer metaphysics." "From the point of view of Economic Science," the individual "unitary end" (or system of ends) is not ethical. It is not "psychological." It is not "technological." It is not even "physiological." It is

none of these things — "from the point of view of Economic Science." What, as a matter of scientific and philosophical fact, it is, the economist, "*qua* economist," simply does not know: he is in the exalted company of the pure mathematical physicist —"*something unknown is doing we don't know what.*"[1] The main difference is that the static formalist not only does not know, he refuses to know: whereas the mathematical physicist gives every indication of being most anxious to find out.

But is it not true that economics is, even for the static formalist, a study of "human behavior," of "human activity"? But not in the concrete. The nature of the end is unspecified — its sole "economic" attribute being (we are now agreed?) a formal, abstract rational unity. The means also must be regarded as "given"— *their* sole "economic" attributes being the abstract categories of "scarcity" and "adaptability." The end, besides being unspecified, is also "given"— in the sense that an actual, static abstract system of "preferences" is accepted as a *datum* behind which, as "economic theorists," we are forbidden to go. All these things being so, it is merely the *formal implications* of "human behavior"— regarded as the abstract activity which mediates between the abstract scarce and adaptable means and the abstract unitary rational end — which the "economic theorist" studies. Any attempt to differentiate this abstract mechanics from an abstract mechanics of technology on the ground that the one is the mechanics of human behavior, while the other is the mechanics of something else, would be to introduce that "material" basis of definition which the static formalist so unqualifiedly rejects.

Is there such an abstract mechanics of technology? I think there can be no room for doubt that there is an abstract mechanics, not only of technology, but of everything else. And if the static formalist (not "qua economic theorist," of course) will investigate some technological problem more accessible in Time and Space than Crusoe with his fire, he will discover embedded in it an abstract mechanics which

1. A. S. Eddington, The Nature of the Physical World, p. 291.

includes not only a "system of ends" but a variety of "adaptable means with alternative uses." I think he will discover, in fact, a whole system of *valuations*. Of course, it will be necessary for him to strip these abstract categories of any base "material" implications which, despite the utmost caution, still cling to them in consequence of his particular outlook as an "economist." The "valuations" involved are not human valuations; the various particular "needs" are not human needs; the unitary, rational system of "ends" is not a human rational system of ends. He will be called upon to adapt his mind to thinking in terms of technical "valuations," technical "needs," a unitary, rational, technical system of "ends." He must think in terms of technical "error" and technical "waste."

I trust it will not be suggested that this is mere metaphor. If "economics" is a purely formal theory of implications, with the end unspecified except as an abstract rational unity, and the means unspecified except as given abstract "materials" possessing "scarcity" and "adaptability to alternative uses," wherein are these terms less metaphorical when applied to "economics" than when applied to technology?

Are we, then, to fall back on the "material" basis, which the static formalist rejects, as the instrument for insulating the various special disciplines from all "irrelevant" intercourse with one another? By no means. Neither the "material" nor the "analytical method" of "definition" can be employed to seal up the various disciplines in airtight receptacles — because these various disciplines cannot be so sealed up. The penalty is death. The only way out of the false dilemma in which we thus find ourselves is in terms of a modern "developmental" logic which I am afraid Professor Robbins would characterize as "pseudo-Hegelian twaddle." It is this mighty instrument of modern creative thought which, perhaps even more than "the armor of mathematics," lies concealed behind the "garb of literature" in which Alfred Marshall presented his Principles to the world.[2] It explains

2. Cf. Edgeworth, Memorials of Alfred Marshall, p. 66; and Marshall, Principles, Preface to the First Edition, p. ix.

why Marshall, pursuing the concrete, achieved *true* "precision," while the abstract formalist, in pursuit of perfect formal precision, fails alike in precision and in formality. The only way to purge economic theory of all material elements is to purge it of "economics." There is no sanctuary for the formalist but Pure Mathematics; and even this is doubtful. To use a Marshallian phrase, the economist achieves "precision" by being "loose with system."

It is important to notice that, while no static logical verbalism can *disseverate* economics from technology, there is nevertheless a relative "material" *distinction* between economics and technology. This is apparent as soon as we try to picture a technologist torturing himself in his own field by trying to disseverate form from substance: worshipping an idol of "pure technology" which is never quite "pure" because its abstract mechanics is constructed out of terms tainted with the earthy flavor of the technologist's own "material" *ends*. It is only in terms of the *concrete end which he wishes to achieve* that the technologist can intelligibly "define" his own specialism; and it is only in terms of the concrete end which *he* wishes to achieve that the "economist" can intelligibly "define" his. They both wish to "maximize" *something* (and they both wish to "minimize" something also); but this something can only be given body, substance and intelligibility in terms of their respective concrete ends. Professor Robbins is quite right in noting a *relative* "independence" of the technological from the economic end; he is mistaken in supposing them capable of mere opposition. The technologist can solve a technical problem in independence of the particular limitations of economic valuations at a particular time and place; but no technological problem is intelligible or existent except relatively to the conception of some end or purpose. What makes a particular problem "purely technological" is the fact that some one (concrete) end or purpose is conceived absolutely and in abstract isolation from other related ends and purposes; and is then solved in terms of the *remaining* limitations (scarcity and adaptability) of the materials (means) employed.

Professor Robbins is also right in stressing the fact that the economic end is wider and more comprehensive than the technological end, which must therefore be subordinated to it. But the isolated technological end is at least concrete and intelligible. Professor Robbins' economic end (the very possession of which he occasionally denies), being conceived as purely formal and abstract, is inherently unintelligible. The reason is, after all, very simple. Technology achieves concrete intelligibility by a straightforward, frank and unquestioning acceptance of the fact that its end is rooted in something that transcends itself: some specific *purpose;* and by a similar acceptance of the fact that in achieving the most "efficient" utilization of the materials with which it works, it is "dependent" at every turn on the special sciences which analyze these materials intensively in their various "aspects" and from various "attitudes." Technology accepts these findings as "given"; but it does not seek at the same time to deny the gift. Technology is therefore dependent, but self-respecting.

A formalistic, static economic theory, on the other hand, can tell us nothing whatever as to *what* it is that the individual — exercising his metaphysical faculty of rational choice — maximizes. To say that he "maximizes" his "tendencies to action" or his "system of preferences" would be unintelligible. To say that he maximizes his "satisfaction," and that the terms "real cost" and "satisfaction," while "blanket" concepts implying no specific theory of either ethics or psychology, are nevertheless indispensable halfway-houses on the way to both ethics and psychology, with which a purely formal economic mechanics must be systematically integrated if it is even to *be* "economics" as well as "mechanics": this is a challenge to honest constructive thought. It is to put the issue squarely up to present-day economics whether a whole science is to enter upon the fatal path of fastidious withdrawal from organic intercourse with its fellows; or whether it will have the courage and honesty to assume its rightful place in the *society* of the sciences. The price to be paid is trifling: the passing pang to its vanity in

the loss of a phantom "authority" that cannot stand the light of day. I cannot here enumerate the rewards; their discovery calls for the best constructive and coöperative work of this and succeeding generations. But even a growth in *precision* will be added unto a science which displays the virility necessary to take this step with integrity. The great peril of modern civilization, thinks Professor Robbins, is the inability of minds trained in the natural sciences to discriminate between the technological and the economic. I think not. I think the really appalling danger lies in the inability of economic formalists to understand that their abstractions cannot be made intelligible except through organic subordination to a concrete social and political philosophy; and in the fact that they are today industriously hamstringing themselves with an antiquated methodology bondage to which can only result in making such a systematic organic synthesis forever impossible.

II

When we turn to the discussion of the Individualist Exchange Economy, we are confronted at the outset with the statement that the "consistency" of the individual "system of ends which are mutually consistent with each other" is "not a consistency of ends" at all! It is a "consistency of achievement." But this curious language turns out to mean simply that the various individual unitary systems of ends, which economics does after all assume, must be regarded as rigorously "non-ethical" in character. But we still do not learn what they *are*. The static formalist is still constrained to describe them in terms of "pointer-readings."

At this point it is vital for the reader to realize that tho the static formalist renders persistent lip-service to the conception of *individual* "rationality," he is necessarily unable to provide this abstraction with even the purely formal characteristics requisite to entitle him to use the term "rational" at all. From the standpoint of an instantaneous or timeless "statics" (which is not true Marshallian Statics), rationality has no meaning. It is only when we explicitly introduce the category of Time; endow the individual with the power to

transcend Time and to "look before and after"; and assign to him a capacity to criticize his own otherwise mere timeless "given," unrelated "impulses," and to organize them *in Time;* that the concept of even formal rationality becomes intelligible.[3] Hence, instead of permitting the static formalist to attribute "rationality" to Crusoe and Lenin (as we provisionally allowed him to do), we must now affirm that this involved a mere empty verbalism on his part, the true situation being that he has completely failed to transcend his own disintegrating pseudo-psychological doctrine of a mechanical plurality of psychic "ends," and is therefore unable to assign even a formal "rationality" to the individual members of his Exchange Economy. An air-tight "statics" has no right even to use the term "rationality." Unless the reader takes a firm grasp of this basic metaphysical truth, he will never grapple successfully with the slippery elusiveness of a cast-iron Austrian "statics."

Furthermore — and this is of the first importance, tho I cannot here elaborate it — even when we have thus given purely formal and abstract intelligibility to the conception of a unitary end (or system of ends) for an individual economy, we are still unable to give to the notion of the "economic problem" of such a rational Crusoe any meaning or content beyond that of an abstract mechanics of "efficiency" equally applicable, as we have seen, to a "technological" problem — or to any other problem of "economy" in the well-nigh universally applicable sense of that word. It is not until Crusoe himself has equipped this abstraction with a concrete content validly conceived in terms of his own inherent "structure" as a human being, that "achievement" by him of a "system of ends which are mutually consistent with each

3. This conception is the merest metaphysical truism; but, tho its significance for Economics is literally tremendous, it has as yet made very little way, even in the most recent developments of the true Classical Tradition (e.g. Pigou's Economics of Welfare). It is present only in the elementary and inadequate concept of "undervaluing the future." In my opinion, its systematic development in relation to economic theory will ultimately result in the organic integration of positive with normative economics, and of normative economics with philosophical ethics and political and social philosophy.

other" becomes more than meaningless verbiage and acquires intelligibility. In other words, no "economy," no Crusoe "economy" even, is conceivable as a "rational system" at all until it is organized in conformity with some concrete conception of "man's chief end." It may be said that, from a so-called "static" standpoint, this means simply a given system of "positive preferences" which are the result of rational reflection; but for a rational being no rational system of preferences is possible in abstraction from Time, and a rational ordering of activities in Time. If we are extremely old-fashioned "Liberals" (or perhaps rather Anarchists), we may hold as an article of political faith that, even in a complex society of many individuals, no "interferences" should be permitted with the ordering by each individual of his own personal "economy," except such as arise automatically from the limitations imposed on each by similar free "economizing" by all the others. But this is not an "economic" doctrine; and in any case the application of the term "economy" to each individual is still unintelligible unless it implies an "end" which is not merely "positive," but is the result of a process whereby the individual has criticized and moulded his mere "given," unrelated "impulses" and "tendencies to action" into a unitary rational system of preferences or relative valuations. If this were not so, such terms as "error," "waste" and so on would have no meaning. The very conception of "economy" thus implies a "norm," quite apart from the question whether that norm is "ethical" in character. And it should now be apparent that no amount of abstract verbal gymnastics can give us any assistance at all in determining the concrete content of this "norm." Its content can only be discovered by actual "scientific" analysis of the "structure" and nature of the man himself. An "economics" which is not a mere formal mechanics equally applicable to technology — or to the digestive system of an ostrich — is therefore inextricably bound up with and "dependent" upon both ethics and psychology. Since "economics" is not itself either ethics or psychology, it must look to these sciences to provide it with developed analyses of the "structure,"

nature, and capacities of man, and of his "end." These *analyses* may be said to be "given" to economics by these fellow sciences,[4] and the expression has intelligibility; but to say that the "means" and the "end" are "given" in the perverted sense that implies an "independence" of any need to *know* the concrete nature of both means and end, is mere hocus-pocus.

If economists who lack philosophical training are still puzzled by the foregoing discussion, I suspect the root of their difficulty lies in the fact that they have allowed themselves to be hypnotized by the mathematical apparatus of demand and supply functions, and the spurious compulsion, resulting from a basic lack of understanding of its significance in terms of reality, which this apparatus exercises over many minds. Assume a Crusoe economy in "stationary equilibrium" (omitting the element of Time for the sake of a brief but inadequate simplicity). Now even this static abstraction can be viewed from two distinct standpoints: that of Crusoe himself; and that of the external observer (the "behavioristic" economist). If Crusoe is a rational being, and his stationary equilibrium represents a carefully thought out and thoroly integrated system of preferences, this equilibrium is for him a *normative* equilibrium; and any departure from it on his part would involve "error" and "waste." But to the "behavioristic" economist these terms have no meaning, since his point of view is purely "positive." It is "positive" not merely in the sense that he accepts Crusoe's rational integration of preferences as "given" (that is, without presuming to question its validity for Crusoe himself in terms of some more comprehensive "norm" in the "realm of ends"— to which he believes Crusoe, in virtue of his own structure, is ultimately subordinate); but also in the sense that he accepts on precisely the same plane any "errors" which Crusoe might make by *departing* from his rational system of static preferences. Hence what is for Crusoe an "error"— a lapse from his own

4. Tho even this language savors overmuch of mere mechanical juxtaposition. In fact, economics can help psychology and ethics just as they can help economics.

self-constituted rational norm — is for the behavioristic economist simply a *change* in Crusoe's system of valuations. That is why, for such an "economist," no "economic problem" exists. For him, as Professor Robbins frankly tells us, the "problem" solves itself. The reader should note that the intellectual confusion responsible for this collapse into final futility is inherently incapable of detection within the realm walled off by static formalism as "economic science." The blunder is a psychological and metaphysical one.[5]

To this problem of the relation of "positive" and "normative" I shall return later. Let us first look a little more closely at the Individualist Exchange Economy as the static formalist conceives it.

III

What is the secret of the power exercised by an allegedly comprehensive and self-subsistent "statics" over even so acute a thinker as Professor Robbins? Beyond any doubt, and on his own confession, it is the delusive promise of a perfect and complete "precision" within certain definite and impassable limits. Stationary general equilibrium in the Exchange Economy, he tells us, is a condition which, "given the valuations of the individuals concerned, satisfies demand most fully." Since the thoro-going formalist refuses to this maximum satisfaction of demand even the traditional modicum of concrete psychological content, the reader may be tempted to inquire: what of it? At first sight, the answer is candor itself, and quite conclusive. By all means, says the formalist in effect, "interfere" with this equilibrium if you want to; but do it intelligently. Do not embark upon acts of collective interference until the economists have first displayed the exact objective consequences of interference and then — not themselves as economists presuming to decide whether the gain is worth the price — have turned the responsibility of choice back to the collocation of atomistic

5. I cannot here show how, immediately the element of Time is specifically introduced into the problem, so that Crusoe's economy becomes "dynamic," issues are raised which, all schools of philosophic thought would agree, involve fundamental problems of philosophical ethics.

individuals or their representatives. At first sight, this seems an altogether praiseworthy, cautious and eminently "scientific" attitude. But there are two points to notice.

First, this is definitely setting a very much higher standard of scientific precision for this collocation of atoms acting collectively than anyone would ever think of setting for them when they act individually. The formal economic theorist, of course, knows nothing whatever, officially, as to the springs of conduct, rational care in making calculations, and so on, of these human atoms acting individually. But I think he would unofficially concede that, even at best, they never really know, and never can know, what the full objective consequences of their individual actions will be, even in their repercussions on themselves. It *may* be a very wholesome thing that, when acting collectively, they "should" try to be *more* cautious and *more* "rational," *better* informed as to the probable consequences of their collective acts, than they habitually are when acting individually. But this is not an "economic" judgment. It may be profound wisdom; or it may be a mere unanalyzed constitutional bias against collective action as such. But whichever it is, "from the standpoint of economic science" as Professor Robbins understands the term, it is "sheer metaphysics." If the atoms of Professor Robbins' economic universe, when acting individually, never acted until they had calculated the full objective consequences of their individual acts, *they would never act at all.*

The formalist regards any attempt to ascertain the collective meaning of an economic universe in which the atoms act *only* individually as lying outside the scope of economic science. As an economist, he simply does not care what *this* collective meaning is; yet, as an economist, he takes it upon himself in the name of an ultimate metaphysical valuation — "the affirmation that rationality and ability to choose with knowledge is desirable"— to counsel the atoms of his individualistic economic universe never to act *collectively* without knowing the nature of the difference this collective action will make in a universe whose "collective" meaning before the difference is introduced he resolutely refuses to consider. I

can only conclude that he has an unscientific bias in favor of a mechanical universe; and that, when that universe begins to act more and more organically he simply does not like it. The mistake, of course, lies not in a scientific dislike of the spectacle of various simultaneous collective acts being "mutually inconsistent" and getting in each other's way; but rather in an unscientific dislike for the problem of finding out whether, and in what ways, and to what extent, the various individual acts also get in one another's way. But the *significance* of collective acts undertaken to modify the consequences of the collocation of individual acts cannot be discovered unless we first know the significance of the collocation of individual acts. To determine the significance of the collocation of individual acts, however, it would be necessary to invoke a concept of human welfare which the economic formalist resents because it involves an honest recognition of his proper subordination to the philosopher. The formalist dislikes to invoke such a concept, also, because he believes it incapable of being analytically employed with "precision." Of this more in a moment. But any competent formal logician will assure him that his own position is exposed to the disquieting *logical possibility* that the simultaneous collective pursuit of *in*compatible "ends" *may* be actually better, on the whole (from the standpoint of those who do possess some concrete conception of the "given end"), than no collective action at all!

Despite the perfect rigor of this reasoning, I am sure Professor Robbins will not find it convincing; and this brings me to my second point. Can the economist provide his atoms with an unambiguous answer as to the objective consequences of proposed specific collective acts? Unless I have completely misunderstood Professor Robbins' position on this grave issue, his answer is itself infected with ambiguity.

There is, of course, no doubt that Professor Robbins can point to a number of special problems (in which the larger, "closed system" question of the ultimate social end is not explicit) in which economists can provide, and have provided, analyses of consequences which are immensely more intelli-

gent than anything of which the atoms are themselves capable without the economist's aid. Surely there is no professional body of men who cannot make at least this claim for themselves. But we are here concerned with something more ultimate than this — the *precise* "scope" of "economic theory." And it is here that I find Professor Robbins' answer lacking in precision. "Economic science," he says, "knows no way of predicting what will be the given data at any particular point of time. It cannot predict changes of valuations. But, given the data in a particular situation, it can draw inevitable conclusions as to their implications. And if the data remained unchanged, these implications would certainly be realized. They must be, for they are implied in the presence of the original data."

No clearer enunciation is possible of the basic theoretical fallacy of pre-Marshallian economic thought. Here, again, we may perceive the paradoxical Nemesis that overtakes the pure formalist in pursuit of Precision. Striving desperately (by means of a concept of "complete mutual determination") to eject *caeteris paribus* from "the" Stationary State, he fatally overlooks the basic "material" element in the situation. Rigorously segregating the "given" data in a "given" situation from "exogenous" changes whose "laws," if discoverable at all, cannot be formulated with "precision," he entirely misses the painful fact that his own self-subsistent and comprehensive formal "statics" is itself infected with a fatal *formal* "looseness"— a lack of precision. For while, as Professor Robbins extensively argues, we do not and cannot know the precise forms of the various "functions" of demand and supply (partly because these forms are continually changing), the one thing we do know about them in a "given" situation is that, taken as an interdependent *whole*, they are *not* so interrelated as to yield "stationary equilibrium." There is therefore an abstract, formal contradiction in supposing that, in working out the *full* "implications" of "given" data, the data themselves can be supposed to remain "unchanged." For in the "dynamic" world in which we live, the working out of the "implications" of "given" data itself changes the

data. The economic system is an organism. It lifts itself by its own bootstraps.

It is difficult to understand why the self-styled adherents of the "mathematical school" should have failed to grasp this. It lies at the very root of Marshall's work, and of his genuinely "precise" treatment of "the" stationary state. His occasional methodological self-explanations may not be as immediately intelligible as they might be. But the present-day static economic formalist has only to consider for a little the modern "pure" physical analogy of "an expanding Universe," combining this with a recognition that the Marshallian demand and supply curves are theoretical instruments for the analysis of an economic price-quantity-time *continuum;* and he will discover new and unexpected possibilities even for a pure economic formalism.[6]

It may be quite true that the specific quantitative assumptions which the pure formalist, because he is a pure formalist,

6. Strictly speaking, he must add to this a clear understanding of the truth that has now dawned on the modern physicist — that "identical laws are a put-up job." It is quite useless for a static formalist to try at this point to wriggle back to his "exogenous" changes; his position is formally untenable, for he does not take all the "given" data at a point in time. He takes an abstraction from them of certain "elements" whose "necessary" mechanical interaction is not true causation at all. The static formalist has in fact "not even begun to find the controlling laws" of the economic system. (Cf. Eddington, loc. cit., p. 238.) Professor Robbins' abuse of the "Historical School" and "the Institutionalists," as such, is pre-Marshallian. It is true that the reflective methodology of many persons who parade something they call "institutionalism" is as philosophically untenable as the reflective methodology of static formalism itself; but the instincts of "Institutionalism" are healthy, while those of static formalism are corruptly sophisticated. The former may flout "Reason"; the latter would stultify it from within. Marshall was well aware of this; and if economic science does not (pace the Marxian) have its own "second law of thermo-dynamics," it may yet prove none the worse for that.

It is worth while to add that the thing Mr. Keynes calls "the English taint" when it appears in index number theory, wears another national costume as "the" stationary state; and that, more subtly disguised, it is present, too, in the monetary conception of a dynamic process devoid of any "infliction" of "forced saving" upon individuals or groups. In one aspect, it is better described as economic Newtonianism; in another, as sentimental Liberalism. The English taint is perhaps discernible in the belief that the taint is an English one!

must then make as to the conditions under which so-called "exogenous" changes are produced in the economy (and as to the precise quantitative character of these "exogenous" changes) are "arbitrary"; but they are less, not more, arbitrary than the sweeping "static" assumption that no "exogenous" changes are produced at all.

The reader must not fail to note that the basic question at issue is one of "pure methodology." Professor Robbins admits that "certain kinds of exogenous change" are "apparently closely connected with changes within the chain of economic causation," and that these are frequently involved in practical problems. He even claims, tho the general tone of his book makes the claim somewhat surprising, that "it is more accuracy in mode of statement, not over-austerity in speculative range for which I am pleading." He is even "inclined to believe that here is a field of sociological speculation in which economists may have a definite advantage over others."[7] Hence the vital point is that, from a purely methodological point of view, his "precise" statics fails of formal precision. Once it is admitted that "the" stationary state is itself a mere arbitrary hypothesis, and that "static adjustments" themselves *give rise* to "dynamic changes," it is immediately open to the pure formalist — not merely, as Professor Robbins suggests, to assume certain "dynamic changes" to occur miraculously and out of nowhere, and then investigate the process of "static adjustment"— but to assume that the process of "static adjustment" itself gives rise, in certain determinate ways, to certain determinate forms of "dynamic change"; and so to build up a purely formal and abstract dynamic mechanics of an expanding economic universe. Such a universe, being purely formal, would be "arbitrary," but not so arbitrary as "the Stationary State." Perhaps, therefore, we shall one day produce a whole crop of Economic Einsteins, each equipped with his own Magic Equation, which will display instantaneously to the eye the distilled quintessence of the vast panorama of shifting shadowy functions of his own favorite Economic Space-Time

7. Does he here refer simply to "the charlatan and the quack"?

Continuum (each having its own concealed *caeteris paribus* lurking somewhere in the background). But if even this, alone, is to be "economic science," I have no hesitation in predicting now that it will prove, like Schelling's Absolute, to be "a night in which all cows are black." The pure formalist will discover that the possibilities of pure formalism are indeed boundless, and that he has entered a realm of absolute freedom in which no choice is possible. For so long as it remains impossible to ascertain the actual concrete laws of "biological" economic development in the actual economic world, no one of these innumerable purely formal economic universes will be one whit better than any of the others.[8]

The static formalist's attempt to rule so-called "exogenous" changes out of "economic science" proper arises from his belief that such changes must forever remain very imperfectly amenable to precise determination of either their conditions or their quantitative characteristics. He is almost certainly right. But this is merely one of the burdens inseparable from the cultivation of a "biological" science. There is no escape into some Inner Sanctuary to be called

8. The foregoing argument is, I think, quite conclusive as it stands against Professor Robbins' "precise statics"; but it is not ultimately satisfactory. I propose to show elsewhere that, putting aside independent changes in the environment of the economic organism, any distinction between "static adjustments" and "dynamic changes" within the organic process is necessarily purely relative to the "frame of reference" of the scientific "observer." This is nothing else but the method which, as Marshall said, is "not quite accurately called the statical method." Its full implications have, however, been unfortunately cloaked by what I believe to have been Marshall's one fundamental analytical error — a failure to perceive that the so-called Principle of Diminishing Utility is irrelevant to long Demand periods conceived in terms of his own definition of a "long period" and his own utilization of the concept in the case of Supply. Once this is grasped, it speedily becomes apparent that the basic static functions (i.e. long period or general equilibrium functions) may, in the case of both demand and supply, assume in the abstract any of the formal logical or mathematical possibilities open to them. It is this error which is basically responsible for so many agonizing efforts to prove the impossible: that, out of sheer formalism, material limitations relevant to the real world may somehow be "deduced." Its removal reveals that determination of specific demand functions is as dependent upon social-psychological analysis as determination of specific supply functions is upon sociological and technological analysis.

Economic Science Proper. The economist can indeed *think* "precisely"; but if he wants "precise" and "authoritative" *results*, he had better resort to formal logic or pure mathematics.[9]

It has thus to be admitted, frankly and courageously, that the economist cannot provide the atoms of his actual economic universe with precise and "authoritative" rulings as to the complete consequences of collective acts of "interference" with the collocation of their individual acts. This does not mean that "static analysis" (properly conceived) is futile; it does mean that such "interferences" may (or rather must) themselves breed a chain of irreversible "exogenous" changes differing in unknown manner and degree from the chain of "exogenous" changes that would have occurred if the "interference" had not been made.[1]

9. Professor Robbins, after ostensibly setting out to answer the question whether economics can discover "the laws of change in the given data themselves," devotes a whole chapter to attacking the notion that empirico-statistical uniformities derived from a given historical segment of economic phenomena can be elevated into universal laws of change. But this is something quite distinct from the conception of the analytically determined conditions of so-called "exogenous" changes in given circumstances. These cannot be projected into the future either — at least in any mechanical fashion; but that does not alter the fact that, from the standpoint of scientific determinism, they must be held to have their necessary and sufficient conditions in the milieu out of which they emerge; and that there is a strictly formal methodological looseness in the notion of a self-subsistent statics. On some of the wider methodological aspects of this problem, as they present themselves quite independently of economic science, the reader may conveniently consult C. Lloyd Morgan's Emergent Evolution. But, to repeat, the full force of the position I have adopted cannot be appreciated unless it is realized that there is no such thing as a separate *kind* of economic behavior called "static adjustment."

1. "It is," says Professor Robbins, "a well-known generalization of Theoretical Economics that a wage which is held above the equilibrium level necessarily involves unemployment and a diminution of the value of capital. . . . The popular view that the validity of these 'static' deductions is vitiated by the probability of 'dynamic improvements' induced by wage pressure, depends upon an oversight of the fact that these 'improvements' are themselves one of the manifestations of capital wastage." I do not question the existence of popular misunderstanding in this matter; but Professor Robbins' assertion involves definite theoretical confusion. The "manifestations of capital wastage" are, in his sense, "static adjustments"; and not "dynamic changes"

It is no use, therefore, for the economist to content himself with being "inclined to believe" that, in the spheres of economic psychology and economic sociology, "economists may have a definite advantage over others." His professional self-respect, and possibly his very professional existence, depend upon his ability to make quite certain that he *has* such a "definite advantage" in these fields; for they are his own. If he repudiates them, he becomes nothing but a pathetically self-important arithmetician. It is therefore of paramount importance that economic science should repudiate, instead, the fundamental methodological error on which abstract exclusionist positivism is based; its failure to understand the meaning of the principle of division of labor which has given rise to the existence of a multiplicity of special sciences. These sciences are, in the strictest sense of the term, a *society;* and each is necessarily "dependent" upon all the others. Economics is necessarily and inevitably dependent upon sociology, upon psychology, upon technology. And its development is dependent upon, and in innumerable ways limited by, their development. It is therefore in the interests of all alike to effect organic relationships one with the other, and so to forward the solution of one another's problems. The social sciences have advanced many alibis to account for their difficulties and shortcomings; and some of these excuses have much substance. But the most striking fact of all is the glaring contrast of their pathological mutual distrust with the sane and healthy mutual coöperation of the natural sciences. The explanation is a deepseated lack of self-respect.

at all. He is merely begging the quite distinct question whether such a policy may not also induce what, in his language, would be "exogenous" changes. This is a question which cannot be solved with the aid of Aristotle's syllogisms and a modicum of calculus; but it is one which, in a vast variety of forms, and with reference to an extraordinary range of situations, demands the development of a mature and cautious wisdom before the "economist" can have any pretentions at all to being an "economic biologist" — and so being worthy of his salt. In the absence of any signs of such budding wisdom in the "economist," Society had much better, when it comes to vital matters of national policy, trust to responsible practical men who have never heard of the "Theory of Variations."

"The Mecca of the economist lies in economic biology rather than in economic dynamics"; and I like to think that the unknown warrior statesman who so wounded Professor Robbins' theoretical susceptibilities with his robust "*Caeteris paribus* be damned!" may really, after all, prove to have been a pioneer economic biologist, doing his imperfect best in a difficult and urgent situation in which his is the responsibility of choice, and in which expert biological assistance is still most painfully lacking. "Your economist," says Professor Robbins, "is a true tragedian." He ought to be; but Sir Josiah Stamp's "pint-pot" theory of the acme of economic wisdom does not make him one. A philosophy of tragedy in the grand manner inevitably involves the conception of *development;* and not only in the progress of the theme itself, but real, tho necessarily "unsuccessful," development even in the victim. The sweep of world events may yet, in this generation, dignify with a tragic fate an economic science struggling to provide an "economic biology" adequate to the task of gaining rational mastery over these events; but the fate of those schools of thought which would barter this heritage for the mess of pottage of an illusory "static precision" will not even be tragic.

In the light of the foregoing discussion the reader should approach with particular caution the assurance that "there is no penumbra of approbation round the Theory of Equilibrium. Equilibrium is just equilibrium." This merely means, as we have seen, that it is certified free of all "ethical" taint. But, despite this certificate of positivistic health, the theory bears also another label: "Interfere with me at your (unspecified) peril!" Which, as all the world knows, is much more terrorizing than any precise specification of penalties in the form of definite hindrances to some concretely conceived "end" or purpose. The static formalist's good faith in this matter could only be unquestionable if he also asserted something else which he by definite implication denies: "Moving Equilibrium is just moving equilibrium; it is the actual his-

torical sequence." For *this* is the Mecca of positivistic formalism; and no gymnastic ingenuity can elude it.[2]

IV

The pseudo-philosophical basis of exclusionist positivism, on the question of the relation of positive economic science to the various normative disciplines which investigate "the realm of ends," seems fairly clear.

"Propositions involving the verb 'ought,' " says Professor Robbins, "are different in kind from propositions involving the verb 'is.' " Again, "Between the generalizations of positive and normative studies there is a logical gulf fixed which no ingenuity can disguise and no juxtaposition in space or time bridge over." And again, "Economics deals with ascertainable facts; ethics with valuations and obligations."

The issues involved are so vast that I can do no more than barely indicate how Professor Robbins has here again been victimized by the fallacy of exclusion. First, the terms

2. Detailed substantiation of this proposition to the satisfaction of the sceptical is probably here impossible. The essential point is that, from a strictly positivistic point of view, there is meaning in the conception of detailed "equilibrating" tendencies within the system; but no meaning whatever in a "positive" moving general equilibrium of the whole economy, if this is conceived as something in any way distinct from the actual historical continuum. Devious and elaborate attempts to evade this simple truth are only explicable as frantic efforts to dodge the resulting responsibility to construct a normative economic science. From a so-called "purely scientific" point of view, "this is the best of all possible worlds and everything in it is a necessary evil."

I expect shortly to publish a study in which it is shown that the notion of constructing (especially for a dynamic economy) a sort of "positivistic norm" — in terms of absence of "error" — along atomistic, mechanical, individualistic lines, besides involving intolerable and insuperable complications of calculation, and forever unrealizable psychological postulates, contains in addition fundamental conceptual difficulties which make the whole thing an intellectual mare's nest.

The reader will perceive that the curious conception of "monetary neutrality" (Hayek, Prices and Production, passim) seems specially designed to enable a strictly "positivistic" theory to make itself practically helpful without becoming "normative." The above methodological conclusion has quite portentous implications with respect to more than one recent ambitious attempt to construct a normative dynamics of monetary control in terms of such positivistic concepts as "the equilibrium rate of interest."

"normative" and "ethical" are not synonyms. Formal logic, for example, is a "normative" science when considered in contradistinction from "the psychology of reasoning," which merely investigates "how we actually think." From this standpoint, logic tells us how we "ought" to reason — on the assumption that Truth is our "norm"— as against how we do. But if the principles of logic are objectively valid, then logic is likewise, in a very real sense, a "positive" science of something that objectively "is," tho the *order* of its "existence" is distinct from that of our "actual" ratiocinations. It should go without saying that no Bohm-Bawerkian reductive technique can explain away the vital *distinction* between these two orders of "existence." But it should also go without saying that this distinction is not "a logical gulf" (whatever that may mean). For one would think it self-evident that no *meaning* can be attached to a positivistic analysis of our "actual" ratiocinations unless these are criticized in terms of the norms of formal logic.

Secondly, since "normative" and "ethical" are thus not identical, it would appear that we may have a "normative" economics which, at first sight at least, is quite distinct from "ethics."[3] For Normative Economics need not — at first sight — investigate the content of the ethical end at all; it can be conceived, provisionally, as taking over from philosophical ethics (as "given") an already developed abstract conception of the ethical end (let us say "maximum net social satisfaction"), and confining itself to the problem of ascertaining the "scientific" economic conditions of its concrete realization. Such an economics would be "normative" when regarded as a study of how the economic system "ought" to work, as distinct from a study of how it does work. But it would not be "ethics"; and it, too, would be "positive" in the sense that it developed the logical implications of certain

3. Philosophical ethics attempts to formulate the rational implications of the concept of an ethical end, and so to discover its content. If an objectively valid ethical end of this kind is discoverable, philosophical ethics, while "normative" when opposed to mere positivistic studies of actual, historical ethical ideas, is yet also "positive" in precisely the same sense as formal logic is "positive."

premises accepted as "given"— ethics providing the "end," and positive economic science providing the "means." In this sense Professor Pigou is quite right in implying that his Economics of Welfare is "positive"; but he has confused the unphilosophical proletariat by not making it clear enough to them (tho the fact itself is obvious) that his study is one of Normative Economics as distinct from the "positive" economics of Marshall's Principles, which explains how the economy does work with only incidental excursions into the problem of how it "ought" to work.

We are faced at the outset, therefore, not with some cryptic "logical gulf" between a simple something called "the positive" and another simple something called "the normative," but with a hierarchy of levels of discourse, each intermediate link in which is "normative" to the one below, and "positive" to the one above. And while it would be quite useless (and quite unnecessary) to seek to pretend that "normative economics" is "positive economics" in the same sense that "positive economics" is "positive economics," it is even more useless to pretend that "normative economics" is in *no* sense either "positive" or "science." The vital significance of perceiving that a particular link in this hierarchy may be regarded as both "positive" and "normative" lies in the consequent recognition that there is something conceptually wrong with the mysterious doctrine of the "logical gap." Otherwise, the pseudo-logician may be expected to complain that we have now a whole series of "gaps"! The point is that it is only as *mediating between* any pair of these levels that concepts of "economy," "efficiency," and so on (in their most general sense) have any meaning at all. To say that the problem of "economics" is the problem of "adapting means to ends" is in itself to say that it is a problem of synthesizing "the positive" with "the normative." And the "normative" in question, if intelligibly formulated, is "positive"; and the solution of the problem of mediation (or adaptation) is a "positive" and "scientific" solution.

We must, however, go even further. The notion that philosophical ethics can be adequately conceived as presenting

normative economics with an initial "gift" in the shape of an abstract conception of "the ethical end," thereafter leaving normative economics to the "independent" investigation of the resulting "positive scientific" problem of "adapting" its "given means" to this "given" abstract "end," while occasionally advanced with the best intentions,[4] and while possessing a relative abstract validity as against Professor Robbins' unintelligible "gulf," is inadequate. For it commits all over again, on another level, precisely the same fallacy of mechanical juxtaposition of organically related disciplines. Just as we have found it unintelligible to speak of "positive" economics "solving" its "problems" in terms of a purely abstract "end," so it is unintelligible to conceive of a normative economics as a "positive" science solving the economic aspects of the "ethical problem" *if* the "given ethical end" is formulated as a mere abstraction. The whole purpose of constructing a concrete system of normative economics is to make "the economic problem" intelligible by supplementing positive economic analysis with a concretely developed and articulated "end" or system of ends. In similar fashion, normative economics itself is dependent for its own internal scientific consistency upon the concreteness and internal consistency (or, in other words, the validity) of the ethical end which is "given" to it. Surprising tho the statement may seem to some, it is merely to employ words without meaning to suggest that normative economics can take over, irrespective of its ultimate ethical validity, some ethical concept of the ethical end, and systematically develop its economic implications. For, unless the end itself is validly conceived, the normative economics which accepts it as "given" must itself ultimately break down in internal intellectual contradiction. There is no escape from this; and it enables us to see how Professor Robbins' more specific criticisms of normative economics (which he employs merely negatively and destructively) can and must, in so far as they have any substance at

4. Curiously enough, Professor Robbins himself in effect mentions it, but apparently without realizing that it disposes of his own simple dichotomy of "positive" and "normative."

all, be turned to positive and constructive uses. Let us look briefly into this.

Professor Robbins would withhold from Normative Economics the magic name of "science" on the alleged ground that the implications of "an ethical postulate" cannot be developed with "precision." By this he seems to mean two things, which it is vital not only to distinguish, but to relate. First, these implications can only be developed, if at all, he thinks, as a result of making what he calls "conventional assumptions"; and, secondly, it is inherently impossible, he holds, ever to compare the "satisfactions" of different persons, so that the whole conception of "social utility" and the structure reared upon it collapses irretrievably.

The first objection seems to involve a basic misunderstanding on his part of the very nature of "scientific" thought; since, from the standpoint of a really philosophical methodology, all sciences, including pure mathematics itself, rest in the last resort on initial "conventions." And, in all sciences, both "positive" and "normative," when they have become sufficiently developed, the ultimately necessary "conventional assumptions" turn out to be nothing other than the "necessary laws of thought." The second objection is more serious, and in my view rests upon a certain substantial foundation, tho it is not accurately stated, and it does not lead to the conclusion drawn from it by Professor Robbins.

It is not difficult, I think, to develop fundamental criticisms of some of the leading conceptions employed by Normative Economics in its present stage of development. But I believe the ultimate basis of this temporary vulnerability will be found, in every instance, to reside in the fact that, even in its most recent developments, the Classical Tradition has not yet disentangled itself from the inadequate postulates of that mechanical "individualism" with which static formalism would strangle the science forever. It is strange that, with his insistence on the thesis that the founders of "positive" economic science "constructed something more universal in its application than anything that they themselves claimed," it should not have occurred to Professor Robbins to wonder

whether the same might not hold true of the founders of Normative Economics. For just as the abstract mechanics of positive economics can be formulated without reference to "psychological hedonism," so the abstract mechanics of normative economics can be formulated without any explicit reference to "ethical hedonism."

When Professor Robbins alleges that the whole structure of "welfare economics" rests upon an illegitimate extension of the so-called Principle of Diminishing Utility to inter-personal comparisons, he has failed to look beneath the surface. For whatever may be the superficial indications to the contrary, it is simply not true that when Pigou, following Marshall, makes a preliminary segregation of differences in money incomes in order to obtain a more adequate basis of comparison between different individuals, his procedure stands or falls on the validity of the "conventional assumption" that all individuals have equal capacity for "satisfaction." He is merely making provisional use of the device of *caeteris paribus*, in which he has "impounded" all the residual elements of difference between individuals which might also be found, on later and deeper analysis, to "justify" differences of treatment.[5] When this fact is properly understood, and its implications explored, it will be found that the methodological procedure of normative economics can be stated, in its most abstract and generalized form, without any reference to "satisfactions" in a so-called "hedonistic" sense. It can be formulated in terms of "welfare," which, as Pigou points out, is a concept capable of being handled in terms of the quantitative category of "greater and less." From a purely abstract point of view, it is quite possible to construct a whole mathematical dynamics of "welfare," just as it is possible to construct a mathematical dynamics of positivistic economic

5. There is a related problem here which I can merely mention: the whole question of "political expediency." This does not refer to some simple, static, and self-evident "convention" nor yet to eternal, unchanging and self-evident "practical limits" to political action. The whole problem of a developing political science and of an ultimate theory of the state is involved here.

processes — or of anything else.[6] Nor does the fact that the initial concept is "qualitative" provide any *differentia* between "positive" and "normative" science.

But — while this would be merely matching, in the normative sphere, the "achievement" of the Austrian School in the field of positive economics — a purely abstract mechanics of "welfare" would be as futile as a purely abstract mechanics of "tendencies to action"; and would, in fact, be indistinguishable from the latter. To be intelligible, it must have concrete content. We cannot, therefore, simply evade, by retreat into formal abstraction, the difficulties raised by the formulation of the "end" in terms of Utilitarian Ethics. The only advantage of a temporary resort to abstraction is that it may enable us to see more clearly what so-called "ethical hedonism" really implies when expressed in terms of the utmost generality. And it can be safely said, I think, that so stated, it implies simply the age-old conception of abstract Distributive Justice. For, if for "quantity of satisfaction" we substitute "quantity of welfare"; and if, with Pigou, we hold that qualitative "welfare" differences among economic phenomena may be expressed quantitatively in terms of more or less (welfare), it follows, theoretically speaking,[7] that every form of qualitative judgment as to *qualitative* differences in "satisfactions" or qualitative differences in "welfare importance" (whether within or between individuals) can be expressed in quantitative terms.

The really important point in all this is that it leads straight to the ultimate question of the relationship between quantitative and qualitative concepts. For in what has been said, this problem has not been solved; it has only been posed. And a very little reflection should serve to show that, in reference to the procedure discussed, it is absolutely wrong to say that the qualitative has been reduced to the quantitative;

6. Cf. Eddington, op. cit., p. 243: ". . . a strictly quantitative science can arise from a basis which is purely qualitative."

7. That is, putting aside the temporary, shifting pragmatic boundary line between what is for the time being practically possible and what is not. Pigou's criterion of "direct" or "indirect" relationship to "the measuring-rod of money" is of course a boundary line of this kind.

and extremely dangerous to say that it has been subsumed under the quantitative. The real truth is that all the various quantitative statements to which a mathematical mechanics of "welfare" could conceivably give rise are, in reality, *qualitative judgments of value in mathematical dress* (or, what comes to the same thing, logical inferences as to the necessary implications of these judgments). While, therefore, the mathematical accuracy of whatever calculations may thus be entailed is of course important in a bookkeeping sense, the basically important thing is that the judgments of value themselves should be ethically valid and so possess an internal ethical consistency. But he would be a rash man who should seek to differentiate "welfare economics" from *any* "science" — even physical science — on the ground that the former was essentially a structure of "qualitative" or "value" judgments expressed in mathematical symbols![8]

V

Professor Robbins' denial of the status of "science" to Normative Economics thus proves, on examination, to be equivalent to denial of the possibility of an objectively valid philosophical ethics. Into this question I cannot here enter; but, if the reader has succeeded in following this unavoidably sketchy examination of Professor Robbins' position, it will now be thoroly apparent to him that the collapse of the conception of an "economic problem" into meaninglessness and futility is the direct and inevitable outcome of ethical subjectivism.

Indeed Professor Robbins is even more explicit. "In the rough-and-tumble of political struggle," he says, when differences of opinion arise about "ends," then "neither Economics nor any other science can provide any solvent. If we

8. It will be recalled, of course, that ethical judgments are only one order of qualitative or value judgments.

The above discussion is intimately related to the famous controversy between Sidgwick and T. H. Green on the question of the intelligibility of "an aggregate of satisfactions." I rashly venture the suggestion that Green is today by way of being proved, on the whole, a better "mathematician" than either Sidgwick or Edgeworth.

disagree about ends it is a case of thy blood or mine — or live and let live, according to the importance of the difference, or the relative strength of our opponents."

It is not quite clear from the immediate context whether this particular dictum is merely a sweeping assertion of the complete and immoral imperviousness of all practical politicians to the logical discipline of philosophical ethics, or a denial of "scientific" status to philosophical ethics itself. But if, as I am inclined to suspect, on grounds of general internal evidence, the latter implication is not entirely absent, it is highly instructive to note how, on this vital and fundamental issue, a valetudinarian Individualism is willing to make common cause with the most violent exponents of Revolutionary Communism. But — in this brutal world at least — it is not safe for the lamb to lie down with either the lion or the wolf; and if the vast conflict of forces now proceeding alike on the stage of History and on the stage of reflective thought were indeed one between these two alone, there can be little doubt that it would be the thin blood of an emasculated and anaemic "Individualism" that would be spilt.

If we adopt a *really* "positive" attitude of a kind strictly consistent with Professor Robbins' methodology — treating individual action and collective action with strict "scientific impartiality," and avoiding Professor Robbins' error of surreptitious injection of a disguised individualistic norm — it is clear that it is no use saying that Society *cannot* "compare" the "satisfactions" of different individuals and assign relative valuations to them. For it *does*. Faced with one of those colorless static alternatives with which Professor Robbins delights to torment the harassed statesman, Society itself *must*, in effect, evaluate the relative collective sacrifices and gains involved; and this process of evaluation *is* comparative evaluation of different individual costs and satisfactions. When the *individual* thinks and acts as a rational unity, he necessarily subordinates the multiplicity of his atomistic "positive" impulses and "tendencies to action" to a systematic norm (even tho this norm is, when imperfectly viewed as a static abstraction, "non-ethical"; and even tho it is

itself merely a "positive" datum for the external observer). Similarly, when Society thinks and acts as a rational unity (which is what it tries and professes to do whenever it acts collectively), it, too, necessarily subordinates the multiplicity of individual "tendencies to action" (and also the multiplicity of individual "norms," in so far as these clash with the social "norm") to its own wider comprehensive social norm. Methodologically speaking, the strictly positive "behavioristic" economist has no right to make any distinction of "desirability" between individual action and collective action. He has, as we have seen, no methodological instrument for distinguishing between changes in individual rational systems of preferences, and "errors" by individuals in failing to adhere in conduct to the implications of these systems (if they have them). Rejecting the evidence of introspective psychology in the case of the "economies" of private individuals, by what right does he accept seriously (and with choking indignation) the evidence of introspective psychology as to the motives of action of public individuals in the performance of collective acts? Neither can he, in the last resort, take refuge in the pose of "impartial expert," informing Society, without "bias" or evaluation, of the various alternative "objective consequences" of proposed alternative collective acts.[9] Even if we do not insist upon the vast prob-

9. To some readers, and to Professor Robbins himself, it may possibly seem that I have been unfair to his position on this matter. But I think I have been quite fair. The chief difficulty of the patient reader is the continual recurrence in various disguises, of the pellet theory of a plurality of "ends." Since the discussion is a methodological one, intended to discover a fundamentally valid conception of economic science, we are called upon to think in comprehensive terms. Professor Robbins' basic thesis is that a comprehensive and socially useful "economics" can be constructed on purely formal and strictly positivistic lines. I have tried to show that this, carried to its logical consequences, eliminates the very concept of "economy." But Professor Robbins repeatedly diverts our attention from these fundamental issues by calling upon us to observe how, when Society presents the economist with some strictly limited and concretely formulated partial "end," the positive economist can differentiate "economical" from "uneconomical" methods of achieving it. Of course he can (if we provisionally ignore the fact that no completely rational solution of a merely partial problem is conceivable), just because this partial "end" has been con-

lems here raised by the organic character of the economy, it is still clear that this attitude only has force and dignity in a world in which the basic structure and form of organization of the economy *as a whole* is for the most part *unchallenged.* But when, as today, it is precisely the "System" as a whole that is being challenged, then it is not only methodologically unintelligible, but is, in sober fact, an act of treasonable abdication, of desertion under fire, to refuse to face the comprehensive problem of the meaning of the functioning of the economy as a whole in terms of the comprehensive social end.

The only way out of the profoundly humiliating intellectual bog into which an exclusionist positivism inevitably leads is to face boldly and in a constructive spirit the theoretical problems of a Normative Economics conceived as organically related both to philosophical ethics and to political philosophy. Let us have done with the undignified farce of sharpshooting at Marxism with toy Austrian pop-guns from behind a non-existent methodological wall. Let us recognize that there are inevitable and deep-seated elements of conflict and irrationality in a normative economics which has grown out of the psychological and ethical doctrines of an age of philosophical individualism. But let us, above all, not lightly imagine that detection of the mere presence of such irrationalism is any evidence that we ourselves possess the clue to a higher and more comprehensive rationality, or an understanding of the real character of these irrational elements. Any genuine defender of an "individualistic" order of things must, indeed, proclaim these irrationalities of his normative

cretely formulated. And that is precisely why, in order to make "economics," comprehensively conceived as an integrated body of doctrine, intelligible, it must, as a whole, be brought into organic relationship with the comprehensive social end, also concretely formulated.

Professor Robbins' reference to his own conception of the social "end" is significantly brief, and even more significantly abstract: "given the desirability of individual liberty, absence of regimentation, power of continuous initiative, there is strong reason for supposing that conformity to the criteria of free economic equilibrium constitutes a fulfilment of these norms." But any pretensions which language of this kind ever had to being an intelligible formulation of the ultimate social or political "end" or "norm" received their death-blow a century ago. The reader should compare Marshall, Principles, pp. 5–10.

economics with sturdy defiance; for they are inherent in Individualism itself.

But Individualism, whether in theory or in practice, is neither clear-cut nor static. The dangerous instability of the modern world is basically due, in the last resort, not to so-called practical or scientific difficulties in the pseudo-positivistic sense, but in part to a lack of conviction on the fundamental question whether reflective thought has succeeded, even in the abstract, in reconciling the claims of an objective, organic social order with the full legitimate "claims" of the "individual," and in part to the fact that hardly any headway has yet been made towards giving concrete content to these concepts in their economic aspects.

The individualist economist shrinks in fear, dislike and lack of understanding from the mighty contribution of Hegel's philosophy to modern thought, because he regards it as the source of Marxism. He is right in this respect, but neurotic retreat of this kind is hopeless. The conception of an organic social order has long triumphed in political philosophy over a mechanical individualism; and the latter concept is unquestionably intellectually doomed in economics also. There can be no doubt that Hegel's defective treatment of the problem of personality made possible the development — without any adequate or effective intellectual opposition— of both a philosophical and an economic foundation for Communism, which *need* not rest on a "materialist" conception of History. Vital developments in the philosophy of personality have since been achieved by moral philosophy proper. But these do not seem to have penetrated even political philosophy, whose progress has in recent years been swamped by "pluralisms" and "anti-philosophies" inherently incapable of effecting the required constructive synthesis in political thought. The specialization and superiority complex of economic science have prevented it, almost entirely, from even realizing that these matters have for it any vital significance. But in fact they hold the key to what may prove to be the greatest of all the problems that confront the modern world: whether the so-called "Liberalism,"

of which the English-speaking peoples are rapidly becoming almost the only remaining defenders, shall perish miserably and without dignity or inner conviction in a world increasingly given over to tyranny and scientific blackguardism; or whether it has the integrity and vitality to discover within itself the dynamic inner meaning and significance which will convert defence into offence, and provide a new and constructive world leadership.

The conception of a merely mechanical universe in economic theory is today intellectually bankrupt. Tho so many of its defenders are still strangely unaware of this, it possesses no intellectual bulwarks capable of withstanding the slow, but all-devouring, advance of a growing communist and collectivist theory. To those who believe that mere reaction from individualism to communism solves no ultimate problems, but merely raises all over again, this time for the Communistic dictator, the *normative* problem of Distribution that has baffled individualism, and who at the same time believe that the "economic problem" of Society, in its comprehensive form, is one for "economists" as well as for "philosophers"; to these there is today a challenge to face the resultant problem of effecting a constructive intellectual synthesis. This synthesis cannot be provided by an "economic science" working in neurotic isolation. It can only be secured through the organically united efforts of economics, political philosophy and metaphysics itself. The Mecca of the economist may lie in economic biology *rather* than in economic dynamics. But it lies in economic philosophy rather than in economic biology. It is only with the aid of a valid and integrated economic philosophy that we can hope to choose with knowledge and understanding among an infinitude of possible economic biologies and an infinitude of possible economic dynamics.

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LARGE-SCALE ENTERPRISE IN THE LIGHT OF INCOME TAX RETURNS[1]

SUMMARY

Purposes of the investigation, 414.— Description of the data, 416.— Importance of the consolidated returns, 419.— Profit ratios: divisions, 433.— Profit ratios: manufacture groups, 439.— Rate of profit on gross sales, 443.— General conclusion, 445.

The purposes of this investigation are three: (1) the appraisal of the proportion of all corporate business handled by the consolidated groups of corporations; (2) the comparison of certain statistical estimates of the rate of profit for various industrial groups of consolidated corporations with corresponding figures for non-affiliated concerns; and (3) the examination of the non-affiliated class separately with a view to discovering signs that it affords a more specific industrial classification.

The investigation is concerned with a special aspect of the general study of income tax data on corporate profits which I developed in the monograph Corporate Earning Power in 1929.[2] Since the appearance of that book, the Treasury has begun the publication of separate data on consolidated groups of affiliated corporations; and the study of this special class of data, in comparison with similar data for all corporate tax returns, is the object of the present inquiry. Two principal analytical devices were developed in the book — the *profit ratio* and the *earnings ratio;* but only the first of these can be applied to the consolidated-corporation data. The central plan of the present investigation is to apply the profit-

1. The principal compilations and computations for this investigation were made under a grant of money from the Harvard University Committee on Economic Research, and were completed mainly in the period January to June, 1932. The outlines of this article were reported in a paper at the Cincinnati meeting of the American Statistical Association in December 1932.

2. Corporate Earning Power, Stanford University Press, 1929, see also articles in Corporate Practice Review for December 1928, July: September, October, November 1931, and January 1932.

ratio analysis of "Corporate Earning Power" to these data on consolidated returns. To facilitate comparison of the new figures with those for all corporate enterprise, certain of the analyses of the book are continued for the years 1928–30; but there is no general attempt here to bring up to date the statistical series, or their interpretations, presented in the 1929 study. As regards methods, the present analysis proceeds on the same lines as those used in the book; and the investigation has led to no essential amendment of the procedure as set forth in 1929.

Roughly one-half of the gross business of all corporations studied is handled by consolidated enterprises; this ratio varies moderately from year to year, varies widely among the various industrial classes, and is much higher for large enterprises than for small. Certain types of industry are predominantly on a consolidated basis, and other types are as emphatically on a non-affiliated unit basis. Among the corporations earning the largest net incomes or showing the largest deficits, consolidated enterprises account for almost all business reported; while, for corporations showing small gains or small losses, the proportion in consolidated groups is almost negligible.

In most types of industry, considerable differences appear between the rate of profit on gross business for consolidated corporations as a class, and that for non-affiliated corporations as a class. But an important share of these differences may fairly be charged to technical peculiarities, and may not therefore reflect any significant difference in the earning power of the two classes of enterprise. Correspondingly, when the non-affiliated class is considered separately, there is little clear evidence that it admits of more precise subclassification by type of industry or that the indicated differences in earning power as between industrial groups within this class are more significant. Examination of certain important accounting items for the consolidated class and the non-affiliated class also yields somewhat negative conclusions as to differences between the two classes.

Description of the Data

Internal revenue laws and regulations had from 1918 on permitted the filing of consolidated returns of closely affiliated corporations; but, altho they formed a very important fraction of all returns, it was not until the publication of Statistics of Income for 1928 that a separate tabulation of data for such consolidated returns was made available.[3] Publication of the tabulations for consolidated returns was continued in the reports for 1929 and for 1930. Thus far, however, separate tabulation of the consolidated data has not been provided in the preliminary statements of statistics of income, which have in each year since 1926 been issued to cover returns filed by the end of August of the year following the calendar year to which the returns in general apply. It is likely that the practice of segregating the consolidated returns will not be extended to the preparation of these preliminary statements; and, as experience suggests that the returns filed through August may be a peculiarly poor sample of the consolidated returns as a class, there does not appear any good reason for urging this extension.

The tabulated corporation data, as presented in successive issues of Statistics of Income, are aggregates of the reported data for each selected accounting item in the corporation income tax return, the aggregates being made up for various classifications of corporations. One of the chief classifications is according to type of industrial activity, and the leading tabulations pertain to the various industrial classes.

The main industrial breakdown is into eight broad classes, which may be designated *divisions*, as follows: Agriculture, Mining, Manufacture, Construction, Public Utilities, Trade, Service, Finance. The Manufacture division is in turn

3. Thus, as early as in Statistics of Income for 1918, at page 12, reference is made to the filing of consolidated returns. See also comment by J. Franklin Ebersole, Susan S. Burr, and George M. Peterson, in Review of Economic Statistics for November 1929, at pages 172, 173, and 179. At page 25 of Statistics of Income for 1928 is the brief announcement: "In addition, for the first time, a special tabulation of data from consolidated returns makes it possible to appraise their significance."

broken down into ten sub-classes, which may be designated *groups*, as follows: Foods, Textiles, Leather, Rubber, Lumber, Paper, Printing, Chemicals, Stone, Metals.[4]

In certain tabulations further breakdowns are presented — the divisions other than Manufacture into their groups, and the Manufacture groups into sub-groups. But the accounting summaries in which we have here chief interest are not available on this finer basis of classification.

As yet the segregation of the consolidated returns in Statistics of Income has not been extended to cover the balance-sheet items as well as the income-account items. Accordingly, altho the new tabulations based upon the consolidated returns present the principal classifications of income statistics along substantially the same lines followed in presenting income statistics for all corporation returns, the "assets and liabilities" tabulations, which are presented for all corporation returns, are not presented for the consolidated returns separately. Possibly the reason for this is that the consolidated income return, filed by a group of affiliated corporations, is not accompanied by a *consolidated* balance-sheet return, but merely by a sheaf of balance sheets for the constituent corporations of the group, in numerous cases. In order that statistical analysis of the consolidated returns may yield more worthwhile results, it is greatly to be hoped that groups of affiliated corporations which file consolidated income returns will be encouraged — or perhaps required — to file consolidated balance sheets. Until this practice is established, and until the balance-sheet data thus submitted are tabulated, it will not be possible to make any analyses of the income data for consolidated returns involving comparison with items in the balance sheet, or interpretation in terms of such items.

In spite of the unavailability of the balance-sheet data, recent publication of income data for consolidated returns as

4. The names given are not precisely as stated in Statistics of Income, where there have been slight changes over the years. Moreover the names are not fully expressive — for example, tobacco manufactures are in the Foods group. In both classifications there is a catch-all miscellaneous class.

a class has suggested the analysis of these data with a view to answering, if possible, certain important questions. The present investigation has been carried on with this end in view; and altho the results are somewhat negative, their presentation at this time will be helpful in promoting further study.

Because 1929 was the final boom year of a long period of prosperity, data for that year show somewhat different results from those pertaining to 1928, and widely different results from those pertaining to 1930. The analysis therefore covers most comparisons for each of the three years separately.

A change in the law in 1928 made a considerable modification in the definition of a consolidated return, so that the data of 1929 and 1930 do not apply to precisely the same class of consolidated corporations as those of 1928.[5] This change in definition resulted in a considerable reduction in the number of consolidated returns. The chief changes were in the Trade and Finance divisions, for each of which there was an important reduction in the number of consolidated returns. As regards these two divisions, it is apparent that the important reduction in number of returns was accompanied by an important reduction in the aggregate gross income only in the case of Finance — the accompanying reduction in gross income for Trade was moderate.[6] It seems probable therefore

5. On page 26 of Statistics of Income for 1929 this modification is noted in the following terms: "Of the total number of corporation income tax returns for 1929, 8,754 consolidated income tax returns were filed for affiliated corporations, as against 9,300 for 1928. This decrease was due for the most part to an additional restriction upon the filing of a consolidated return provided by section 141 (d), revenue act of 1928, applicable to the taxable year 1929 and subsequent taxable years, that where one or more chains of corporations were connected through stock ownership with a common parent corporation, at least 95 per cent of the stock of each of the corporations (except the common parent) be owned directly by one or more of the other corporations; and the common parent corporation own directly at least 95 per cent of the stock of at least one of the other corporations. For 1928 returns the single common parent was not essential and a consolidated return could be filed if at least 95 per cent of the stock of two or more corporations was owned by the same interests."

6. The total number of consolidated returns for all divisions was reduced from 9,300 to 8,754; and this reduction of 546 returns reflects

that the change in the law had its only considerable effect in the Finance division. In no other division, except Trade and Finance, was there any important change in the number of consolidated returns from 1928 to 1929.

In considering statistics for the various divisions separately and in combination, I shall limit examination to the five divisions Agriculture, Mining, Manufacture, Construction, and Trade — except briefly in connection with Tables I and III. The reasons for this limitation are presented at length elsewhere; they concern chiefly the definition of the profit ratio, which forms the central feature of this analysis.[7] In fact, the three divisions (besides the miscellaneous division) which are excluded — Public Utilities, Service, and Finance — are divisions for which the Statistics of Income tabulations do not include data on *gross sales*. Accordingly the *gross income* item for these divisions is not "gross" in the same sense and to the same extent as for the other divisions. I shall therefore have in mind only the five divisions listed above in speaking of "all divisions" in the following analysis. It will be noted that this selection excludes the division Finance for which, as seen above, the 1928 change in regulations resulted in a significant change in the coverage of data from 1928 to 1929.

Importance of the Consolidated Returns

An important step in examining the income statistics for the consolidated returns as a class consists in studying the importance of this class in the entire body of corporation income returns. In the course of this investigation we shall examine data pertaining to the consolidated returns as a class, and also data pertaining to all other returns as a class,

chiefly a decline from 1,731 to 1,450 in Trade, and from 2,121 to 1,907 in Finance. Total gross income reported in consolidated returns, for all divisions, rose from 69,825 million dollars to 72,456 between 1928 and 1929; while the corresponding figure for the Trade division rose from 9,210 million dollars to 9,558; and that for Finance declined from 8,890 million dollars to 3,264 (these figures are compiled from page 34 of the 1928 issue, and page 27 of the 1929 issue of Statistics of Income).

7. Harvard Business Review, April 1933, page 336.

TABLE I. — NUMBER OF RETURNS FILED, TOTAL, AND CONSOLIDATED

	1928		1929		1930	
	Total	Consolidated	Total	Consolidated	Total	Consolidated
All divisions	495892	9300	509436	8754	518736	8951
All, five selected divisions.*	273371	5823	278003	5476	278498	5592
Agriculture	10265	131	10615	107	10961	106
Mining	18793	526	18261	509	17635	502
Manufacture	95777	3237	96525	3216	95098	3277
Foods	15404	502	15561	498	15252	488
Textiles	14508	357	14629	363	14692	384
Leather	2440	100	2477	96	2461	98
Rubber	723	54	638	43	607	48
Lumber	7947	289	7869	278	7501	282
Paper	2093	105	2145	105	2113	107
Printing	11127	227	11569	228	11736	253
Chemicals	7501	405	7505	398	7380	409
Stone	4852	130	4816	140	4724	136
Metals	20695	830	21047	844	20831	837
Construction	18770	198	19947	194	20035	187
Public utilities	23662	789	23951	806	23662	789
Trade	129766	1731	132660	1450	134769	1520
Service	36829	549	39642	554	42064	582
Finance	145433	2121	150588	1907	153182	1982

* Excludes Public utilities, Service, Finance, and miscellaneous.

TABLE II. — PERCENTAGE OF ALL CORPORATE GROSS INCOME WHICH APPEARS ON CONSOLIDATED RETURNS, BY SPECIFIED CLASSES

	Total List			Income Corporations only		
	1928	1929	1930	1928	1929	1930
All divisions*.....	40.1	43.6	46.2	42.5	45.9	50.7
Agriculture.....	30.6	33.4	30.3	36.2	39.5	42.4
Mining.....	54.1	57.1	58.3	57.4	59.4	60.6
Manufacture.....	52.7	57.2	60.0	54.9	58.6	63.6
Foods.....	59.4	62.0	63.3	62.5	57.8	59.0
Textiles.....	20.7	23.1	23.4	19.3	22.2	18.7
Leather.....	38.7	43.1	43.6	39.3	44.1	47.0
Rubber.....	79.7	81.7	84.2	75.2	77.6	79.8
Lumber.....	26.7	26.7	28.8	27.7	26.3	18.8
Paper.....	40.0	42.0	43.2	35.1	43.6	34.2
Printing.....	32.7	33.2	33.4	34.8	34.7	37.2
Chemicals.....	69.3	78.6	85.2	70.2	80.9	86.8
Stone.....	35.0	40.0	42.5	37.3	43.2	51.0
Metals.....	62.7	67.3	66.5	64.0	68.9	70.5
Construction.....	10.3	14.6	15.3	11.2	17.5	17.2
Trade.....	21.3	22.0	25.7	23.2	24.6	31.1

* Five divisions only: Agriculture, Mining, Manufacture, Construction, and Trade.

TABLE III. — PERCENTAGE OF ALL CORPORATE NET INCOME WHICH APPEARS ON CONSOLIDATED RETURNS, BY SPECIFIED CLASSES

	Total List			Income Corporations only		
	1928	1929	1930	1928	1929	1930
All divisions	54.6	59.7	119.8	47.7	51.1	52.5
All, selected*	54.6	60.5	112.7	48.0	52.6	53.8
Agriculture	84.6	111.2	b	37.7	36.2	43.1
Mining	99.9	74.2	a	54.4	57.1	47.7
Manufacture	57.7	63.6	88.2	53.5	58.5	60.3
Foods	54.0	54.8	61.0	50.8	51.3	56.0
Textiles	35.6	40.5	a	29.1	31.6	31.3
Leather	56.7	71.5	a	49.2	54.9	64.5
Rubber	a	26.5	a	55.7	64.4	52.1
Lumber	46.3	32.0	a	30.6	27.1	17.6
Paper	31.4	41.2	33.2	31.6	39.2	37.0
Printing	40.2	35.9	26.8	36.0	35.0	27.0
Chemicals	66.3	80.8	81.8	64.1	78.3	78.2
Stone	46.6	51.0	83.0	41.9	44.9	48.1
Metals	65.0	67.7	81.5	62.4	64.6	66.9
Construction	22.8	31.9	28.4	16.0	21.6	16.7
Public utilities	81.5	82.6	82.1	78.6	79.6	78.1
Trade	37.6	41.1	b	30.4	30.5	37.4
Service	44.2	57.5	105.6	28.6	36.3	39.3
Finance	23.9	18.8	a	20.7	21.1	19.0

* Includes five divisions: Agriculture, Mining, Manufacture, Construction, and Trade.
a. Both items negative.
b. Denominator item negative.

to which we shall customarily refer as "non-affiliated" returns; and we shall compare these results in general with corresponding figures for both classes combined. Hence, it is of considerable moment to have an appraisal of the relative magnitude of the two classes. From the point of view of number of returns, the consolidated class is very small indeed. This assertion holds not only for the aggregate including all five divisions, but also for the individual divisions, and for the groups within the Manufacture division (see Table I, which shows also data for the excluded divisions). The number of returns, however, is a very poor basis for estimating importance, because — on any fair measure of size — the consolidated returns run much larger than the non-affiliated returns.

As is so generally the case in the study of the corporation income tax statistics, some other measure of importance than the number of returns is needed. For this purpose the best indication available is the gross income as defined in the official statistics.[8] I have tabulated the gross income for the consolidated returns by divisions and Manufacture groups, and have compared these figures with corresponding gross-income figures for all returns (for 1928, 1929 and 1930 separately). These comparisons, presented in the form of percentages, appear in Charts 1 and 2. In making these charts the divisions are arrayed vertically according to the size of the percentage in 1928, and the Manufacture groups are similarly arrayed.

The results show that in each year nearly one-half of the total gross income for all corporations in all divisions was reported in consolidated returns. The percentage figure ranged widely among the five divisions, from over fifty per cent for Manufacture to less than fifteen per cent for Construction. In the case of Manufacture the percentage for the

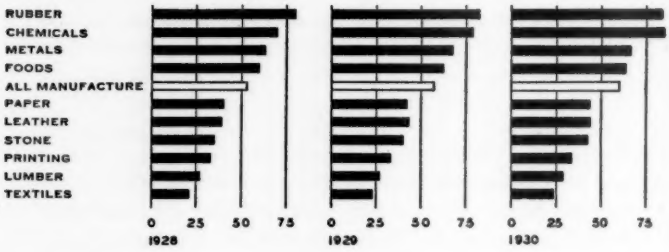
8. "The term gross income . . . differs from that of total receipts as used in the Statistics of Income by only the amount of tabulated tax-exempt interest. The gross income represents the total income as reported on the face of the return, plus the difference between gross sales and gross profits from trading or manufacture (i.e., cost of goods sold) . . .," as stated by Ebersole, Burr, Peterson, loc. cit., page 186.

CHART 1

Percentage ratio, of the gross income of consolidated and non-affiliated returns combined, which is reported on consolidated returns, by divisions.

CHART 2

Percentage ratio, of the gross income of consolidated and non-affiliated returns combined, which is reported on consolidated returns, by Manufacture groups.



entire division was considerably above fifty for each year, and the percentages for the ten groups ranged widely, from about eighty per cent for Rubber to about twenty per cent for Textiles. Changes in the percentages for the individual divisions and groups, over the three years, were in general not important; and it appears that the relative importance of the consolidated returns as a class did not change much during these years of generally high prosperity followed by crisis.

The tabulations of income returns in Statistics of Income generally include not only data for all returns, but also separate data aggregated from those returns which report a net income. Correspondingly, tabulations are generally given also for the other returns, which show no net income (show,

in other words, a deficit).[9] For some purposes it is helpful to make separate analyses of the income corporations as a class, especially as the income corporations include the major portion of corporate industry in most years. I have worked out percentages, similar to those of Charts 1 and 2, for the income corporations; and the results appear in Table II. The percentages exhibited for the income corporations show in the main the same relationships indicated by those of Charts 1 and 2, which pertain to all corporations.

Another basis upon which to reckon the relative importance of consolidated returns as a class, is in terms of net income.[1] Essentially, we are using a *net* figure for net income — that is to say, we are deducting the aggregate deficit of no-income corporations from the aggregate net income of income corporations. Altho net income is not strictly a measure of the size of corporate enterprise, it may be regarded as a useful but limited indicator of relative importance. I have, accordingly, worked out the same type of analysis for net incomes as that shown in Charts 1 and 2 for gross incomes. The results appear in Charts 3 and 4.

Here again the order of arrangement is in terms of the size of the percentage in 1928, both for the divisions and for the Manufacture groups. The indications based on net income are somewhat different from those shown above for gross income. The order of arrangement, based upon the 1928 figures, is somewhat changed. Agriculture is second from the top in Chart 3, whereas Manufacture is second in Chart 1. Mining, however, is at the top, and Trade and Construction appear in the same order at the bottom, in both charts. In the array of Manufacture groups, Rubber is at the top in Chart 2, but at the bottom in Chart 4; Lumber, Printing, and Textiles are near the bottom in each chart.

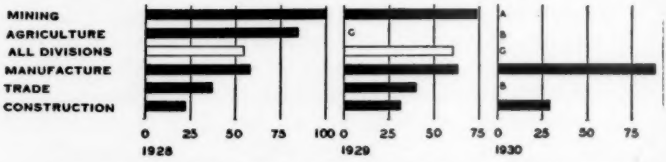
9. Adopting the excellent practice of S. H. Nerlove in "A Decade of Corporate Incomes" (University of Chicago Press, 1932), page 13, I shall call the returns which show net income "income corporations," and similarly the returns which do not show a net income "no-income corporations."

1. The term net income, as used in this discussion, represents statutory net income as defined in Statistics of Income. In important respects it is the most accurately determined item in the account.

In another respect Charts 3 and 4 differ from Charts 1 and 2; the shifts from year to year, both for the divisions and for the groups, are much more extensive for net income than for gross. Correspondingly, the arrangement in the arrays, as based upon 1928 figures, is less well preserved for net

CHART 3

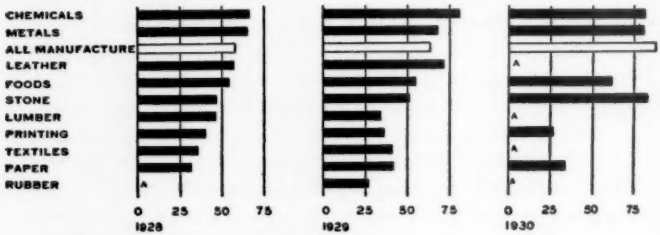
Percentage ratio, of the net income of consolidated and non-affiliated returns combined, which is reported on consolidated returns, by divisions.



A — numerator and denominator negative; B — denominator negative; C — numerator greater than denominator.

CHART 4

Percentage ratio, of the net income of consolidated and non-affiliated returns combined, which is reported on consolidated returns, by Manufacture groups.



A — numerator and denominator negative.

income than for gross. An interesting, but not surprising, fact is that certain of the net income percentages take on quite exceptional values. Thus the Mining percentage of Chart 3 is almost exactly 100 in 1928; and the Agriculture percentage is even more than 100 in 1929, since the consolidated corporations in this division had an aggregate net income in 1929, whereas the non-affiliated corporations had

a net deficit. The Rubber group for 1928 is also peculiar, in that both consolidated corporations and non-affiliated corporations showed an aggregate deficit for that year — a condition which in 1930 prevailed, again, in four Manufacture groups and in the Mining division.

In spite of the several considerable differences between the results for net income and those for gross, the main indications are not greatly different. Both sets of ratios indicate that the consolidated returns as a class cover a very important share of the business of all corporations, and both show that there is considerable variation in this percentage as among divisions and among groups. The time variations of the percentages based on gross income (Charts 1 and 2) are, however, not considerable.

As in the case of the analysis of relative importance from the point of view of gross income, I have worked out the indicators of relative importance in terms of net income for income corporations separately as well as for all corporations. The results are shown in Table III; and this table accordingly is similar to Table II, just as Charts 3 and 4 correspond to Charts 1 and 2. Detailed comment upon Table III, with particular reference to the percentage which consolidated returns represent in the total for all income corporations, is not necessary; for the general indications are substantially in accord with those already discussed.

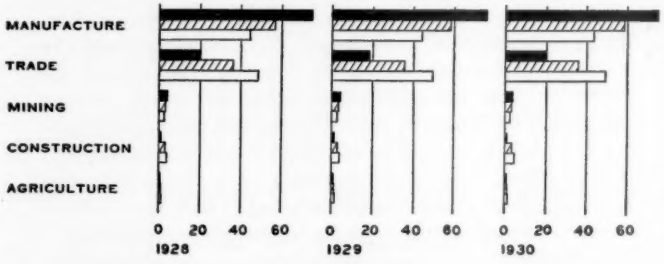
Consideration of these figures for income corporations raises a point of distinction between the consolidated corporations and the non-affiliated corporations. In the case of a consolidated return, a deficit in one of the constituent corporations is set off against the net income of the rest of the group of affiliated corporations. If, instead of a consolidated return for the whole group, each constituent corporation in the group made a return, certain of the constituents would fall in the income corporation class and the others in the no-income corporation class. The income corporation class of consolidated returns thus conceals within itself certain corporation units which actually earn a deficit. Similarly the no-income corporation class of consolidated returns conceals

within itself certain corporation units which actually earn a net income. Therefore the comparison, suggested by Table III, of income corporations among the consolidated returns with income corporations of both sorts combined is somewhat imperfect.

Another way of considering the general question of the importance of the consolidated returns consists in comparing the figures which distribute the gross income among divisions and groups on a percentage basis, for the consolidated cor-

CHART 5

Percentage distribution among the divisions of the gross income of all five divisions combined; separately, for consolidated returns (solid black), non-affiliated returns (white), and both classes combined (shaded).



poration class with the non-affiliated corporation class. Chart 5 shows the distribution of the gross income reported, for all five divisions combined, among the several divisions. This distribution is made on a percentage basis for the consolidated returns as a class (the solid black bars), for the non-affiliated corporations as a class (the open bars), and for both classes combined (the cross-hatched bars). The arrangement of the divisions, from top to bottom, is determined by the size of the percentage in 1928 for both classes combined — that is, by the cross-hatched bars.

The cross-hatched bars alone show that a very large share of corporate business, in terms of gross income, is done by companies reporting in the Manufacture and Trade divi-

sions.[2] The arrangement of the triple stacks of bars by divisions emphasizes the degree to which this distribution, for both classes combined, is not maintained for each class separately. Thus, altho the Manufacture percentage is still the largest for the consolidated returns, it is not the largest for the non-affiliated returns — for this class, the Trade percentage is slightly higher. A corresponding difference appears in the case of the second largest percentage: for both classes combined and for the consolidated returns, it is in Trade; but for the non-affiliated returns, it is in Manufacture.

The chart shows the consolidated returns are distributed differently (on the basis of gross income) among the divisions, than the non-affiliated returns. Manufacture has more than its share of the consolidated groups, and Trade has more than its share of the non-affiliated returns. Likewise, Mining is somewhat more extensively on a consolidated basis, and Construction is more extensively on a non-affiliated basis. Too great importance should not be attached to these indicated tendencies, chiefly for two reasons. It is possible that the likelihood of covering, into the statistics for the consolidated returns of a given division, data truly representing activities in other divisions accounts for at least part of the discrepancy between the consolidated and non-affiliated percentages for the Manufacture division. The extraordinary change from 1928 to 1929 in the Finance division, noted above, suggests that these indicated tendencies may easily suffer wide modifications when some moderate change is made in the scheme of reporting.

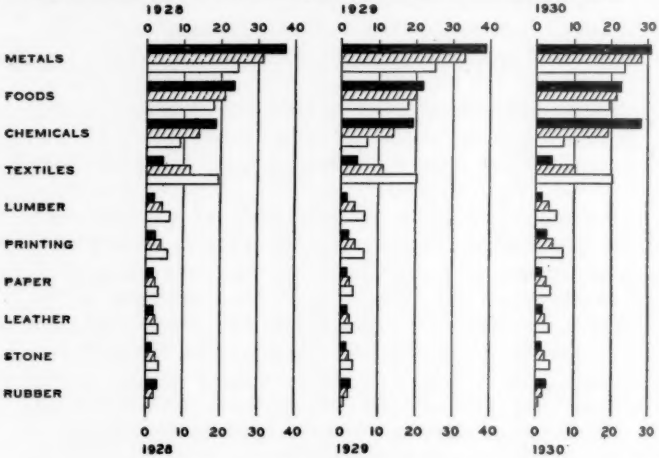
Chart 6 is arranged on the same scheme as Chart 5, but applies to the Manufacture groups. The order of magnitude here also differs somewhat between the two classes. The cross-hatched bars show Metals and Foods in first and second places; but, altho the solid bars maintain this arrangement (and indeed maintain it for the four top groups) except in 1930, the open bars preserve for Metals the top place but give Textiles second place in each year. This merely empha-

2. An elaborate discussion of this point, and related points, appears in Corporate Earning Power, especially at pages 39, 44.

sizes the remarkable extent to which the Textiles group remains upon a non-affiliated basis. Despite the existence within this group of a considerable number of well-known large consolidated concerns, the business of the group is still dominated to a remarkable degree by non-affiliated corporations. The disparity between the percentage for the con-

CHART 6

Percentage distribution among the Manufacture groups of the gross income of the Manufacture division; separately, for consolidated returns (solid black), non-affiliated returns (white), and both classes combined (shaded).



solidated class and that for the non-affiliated class is wider for the Textiles group than for any other group or division.

Related data, calculated on the same basis as the percentages of Charts 5 and 6, and pertaining to income corporations and no-income corporations, were examined; but the ratios were not sufficiently different from those shown in the charts, in most divisions and groups, to suggest any helpful comments.

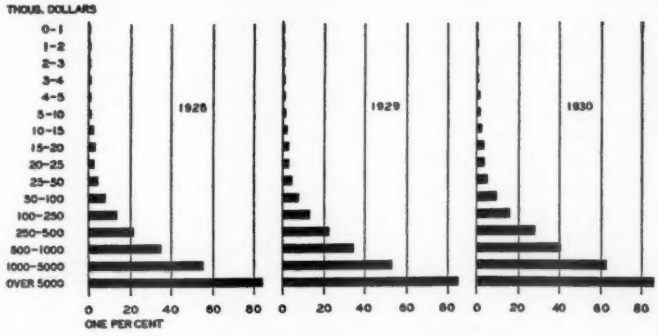
There is yet another important approach to this question of the relative importance of the consolidated returns. Among

the special tabulations in Statistics of Income is a distribution of returns according to the amount of net income (and also net deficit) reported. As a measure of the size of corporations, net income is not satisfactory.[3] It is at present, however, the only approach to a size classification which is available; and it is a useful basis of analysis.

This classification according to the amount of net income per return is stated in terms of the number of returns, and

CHART 7

Percentage ratio, of the net income of consolidated and non-affiliated returns combined, which is reported on consolidated returns, by classes according to amount of net income.



also in terms of the aggregate amount of net income, for each net income class and for each deficit class. There are figures for the consolidated returns separately, as well as for all returns combined. For each net income class, I have calculated the percentage ratio of the aggregate net income for the consolidated returns to the aggregate net income for all returns. The results are shown in Chart 7, and corresponding figures for the net deficit classes appear in Table IV.

This chart brings out emphatically the dominant position of the consolidated enterprises among corporations having

3. This point is discussed at length in Corporate Earning Power, at pages 145, 150, and 285.

TABLE IV. — PERCENTAGE RATIO OF NET INCOME OF CONSOLIDATED RETURNS TO NET INCOME OF ALL RETURNS, BY CLASSES ACCORDING TO AMOUNT OF NET INCOME AND DEFICIT.

Class Limit*	Income Corporations			No-income Corporations†		
	1928	1929	1930	1928	1929	1930
0	.50	.29	.34	.61	.35	.32
1	.57	.38	.42	.59	.47	.43
2	.67	.56	.55	.91	.70	.55
3	.97	.75	.95	1.14	.75	.61
4	.99	.77	1.19	1.19	1.13	.93
5	1.34	1.36	1.66	1.54	1.41	1.30
10	2.18	1.95	2.44	2.15	2.06	2.09
15	2.92	2.82	3.47	2.98	2.73	2.89
20	2.49	2.67	3.62	4.22	2.75	3.45
25	4.48	4.25	5.71	6.10	5.62	5.58
50	8.11	7.44	9.06	10.70	11.24	10.64
100	13.55	12.95	15.72	21.8	20.0	19.40
250	21.4	21.9	27.6	31.4	30.6	31.0
500	35.0	34.0	40.4	37.8	36.8	41.6
1000	54.9	52.8	62.6	56.9	50.6	57.8
5000	83.8	84.9	86.2	76.2	68.7	75.3

* The lower limit only, of each interval, is given. The unit, for net incomes and deficits, is one thousand dollars.

† For the no-income corporations, the percentage is taken as the ratio of the consolidated deficit to the "all" deficit.

large net incomes, and extraordinary year-to-year consistency. In the highest net income interval (that for net incomes above five million dollars), the consolidated returns account for more than eighty per cent of the entire reported net income. Even in the next lower interval (that for net incomes between one and five million dollars), the consolidated returns account for more than one-half of the total. On the other hand, for each interval with net income below one hundred thousand dollars, consolidated returns yield less than ten per cent of the total; and for most of these intervals very much less than ten per cent. It is possible that statutory net income is a less good indicator of profits for concerns with small net incomes (or deficits) than for the larger concerns. One reason suggesting this possibility is that smaller enter-

prises may distribute a larger share of their profits in the form of salaries, with a resulting reduction in net income.

These various attacks upon the question of the importance of the consolidated returns as a class yield some emphatic conclusions. The consolidated class is a very important share of all corporate enterprise; it is more important for some types of enterprise, such as Manufacture, than for others, such as Trade; its relative importance is far greater among concerns of large net income or deficit than among small concerns; its relative importance, on the whole and in specific lines, changes little from year to year. Some of these conclusions are in line with those reached by Professor Thorp in a study of census data.[4] The lack of close similarity between the census classification and that of the Treasury, as well as other disparities between the two bodies of data, stands in the way of any close comparison between results from the two types of data.

Profit Ratios: Divisions

In order to make a comparison of the earning power of enterprises filing consolidated returns with that of other enterprises, we are largely restricted to such a measure of earning power as the profit ratio. This statistical summary number I have heretofore defined as "the percentage ratio of net income minus income tax to gross income."[5] This ratio has been discussed by various writers, among whom some have criticized it as lacking in significance, while others have used a modified form of it, in which either the numerator or the denominator is defined somewhat differently from the above.[6] There has appeared to me as yet no clear reason for

4. Willard L. Thorp, The Integration of Industrial Operation, United States Census, 1924.

5. See Corporate Earning Power, page 5.

6. I make no comprehensive list of such writings, but refer particularly to the following: Ebersole, Burr, and Peterson, loc. cit., page 192; Lucille Bagwell, The Journal of Business, October 1929, pages 351 and 354; Nerlove, loc. cit., Chapters III and V; Ralph C. Epstein, "Industrial Profits in the United States," shortly to be published by Nat. Bur. of Econ. Res., 1933, Chapters IV and V; and my further statement in Harvard Business Review, April 1933, page 345.

changing the original definition, altho I have concluded to limit its application to the five industrial divisions studied in this investigation.

It is well to remark at this point that a quite different measure of earning power would admittedly be preferable if we could obtain such an index satisfactorily from the data available. In an earlier investigation, I made some attempt at getting a rough measure of earning power based upon a capital-assets figure rather than a gross-income figure as denominator.[7] The "earnings ratio" developed in that connection had certain serious flaws; and it was unavailable for use in the study of the more detailed industrial classifications, and even for the major classifications in numerous earlier years. Much further attention has been given by several investigators to the measurement of earning power in terms of capital-account items; and, at least for all corporate returns in the aggregate and for certain major classifications, much more satisfactory measures of this sort are now available.[8] It is greatly to be hoped that such measurement of earning power in terms of properly selected items in the capital account may presently be feasible for the more detailed industrial classifications, and also for the consolidated returns separately classified. At present, however, Statistics of Income tabulations do not include segregated balance-sheet data for the consolidated returns. However desirable such tabulations are, we must in the main content ourselves with the use of those less satisfactory measures of earning power which are expressed in terms of gross income as the denominator.[9]

Chart 8 shows the profit ratios for all divisions combined, and for each division (arranged according to amount of gross income in 1928). The ratios are shown separately for each year; and each stack of three bars includes one ratio each for the consolidated returns (solid black bar), non-affiliated returns (open bar), and both classes combined (cross-hatched

7. Corporate Earning Power, Chapter VII.

8. See, for example, Nerlove, loc. cit., Chapters VI and VII.

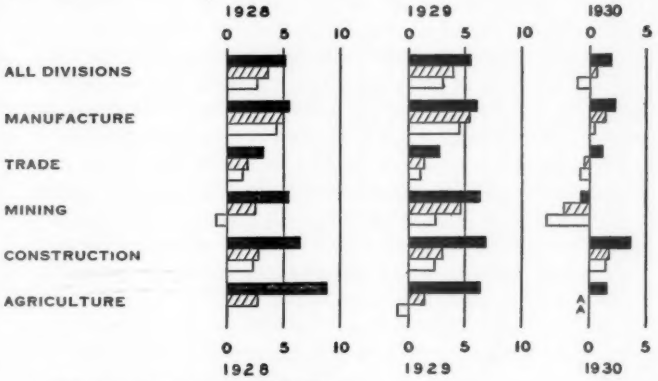
9. See, however, another basis of comparison, discussed below at page 443.

bar), following the corresponding arrangement developed in Charts 5 and 6.

This chart is designed primarily to emphasize the comparison of the three bars within any one division, in each of the years. For example, the stack of bars for All divisions for 1928 indicates that the profit ratio was considerably larger for consolidated returns than for non-affiliated returns, with

CHART 8

Profit ratios, based on income and no-income corporations combined, for all five divisions combined and each division; separately, for consolidated returns (solid black), non-affiliated returns (white), and both classes combined (shaded).



A — large negative number, see Table III.

the combined class necessarily intermediate. This relationship was borne out in 1929 and 1930 (non-affiliated ratio negative in 1930); and it appears also for each division in each year, if we take due account of the negative signs for Mining in 1930.

Is it to be inferred that consolidated corporate industry is more profitable than non-affiliated corporate industry? An affirmative answer is by no means clearly indicated. It must constantly be borne in mind that, within any one division, there is a wide variation in the type of activity represented

by the returns included in the division. Some such types of activity may normally be much more "prosperous" than others — the word prosperous being used in the sense implied in the definition of profit ratio.[1] It may turn out that within a particular division the more prosperous types of activity tend to be handled by consolidated enterprises to a greater extent than the less prosperous activities. This condition, if it exists, tends to produce a disparity between the profit ratios for the consolidated returns and for the non-affiliated returns.

Similarly, the fact that consolidated returns are filed more generally among larger enterprises may bring about a disparity between the profit ratio for consolidated returns and that for non-affiliated returns, in case the earning power of large enterprise is systematically different from that for small enterprise.[2] In so far as the greater earning power indicated for the consolidated class is due to the greater tendency for large enterprises to fall in this class than in the non-affiliated class, the evidence of the chart points definitely to the conclusion that large-scale enterprise has the greater earning power. Similar consideration of other possible bases of classification within a particular division would suggest other possible explanations of a "technical" disparity between the profit ratios.

Without elaborating the discussion bearing upon these other possible explanations, let us take note of a different sort of difficulty in interpreting the figures. It has been observed above that the reported net income of a consolidated

1. The reasons why the profit ratio does not truly indicate which corporations are relatively more "prosperous" are largely inherent in the definition of the ratio. Chief among the difficulties is that the turnover of capital may differ widely from one industry to another, or even from one corporation to another, with the result that a high profit ratio may not be associated with a high return upon investment. I have already referred to this matter in Corporate Earning Power, especially at page 143; and other writers have drawn attention to the same point.

2. It is shown above that consolidated returns are more likely to appear in cases showing large net incomes (and also large deficits), but it is to be noted again that the size of the net income is not necessarily a good measure of the size of the enterprise.

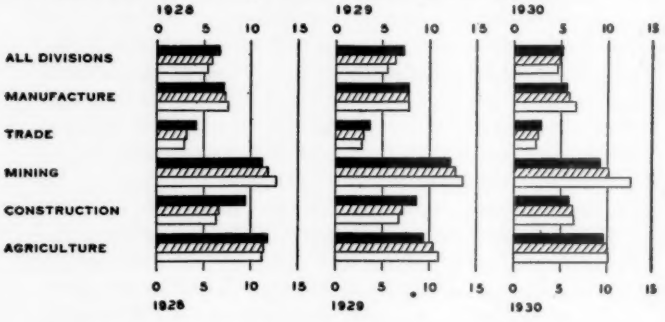
return is a *net* figure in a special sense — it is the difference between the aggregate net income of those constituents of the affiliated group which have a net income and the aggregate deficit of the other constituents. So long as we are considering profit ratios for all corporations — both income corporations and no-income corporations combined — this fact appears to have no bearing upon our numerator. But let us consider the denominator of our ratio along the same line as the numerator. It is clear that the reported gross income of a consolidated return may be distinctly smaller than the aggregate of gross incomes of the constituent corporations, particularly in the case of a highly integrated consolidated group.[3] It is impossible to secure any precise basis of estimate, from the figures tabulated and published, of the extent to which this condition may affect the computed profit ratios. In groups of affiliated corporations which are not highly integrated — and many consolidated returns presumably apply to such groups — it does not seem likely that the reduction of gross income due to filing a consolidated return is large. On the other hand, in groups for which the relationship is largely through investment rather than operating control, the reduction may run high. On the whole, difficult as it is to form an estimate of the degree of reduction in the aggregate, we may fairly assume that all of the disparity between the consolidated profit ratio and the non-affiliated profit ratio should not be charged to this cause, particularly for those divisions in which such disparity is very large.

3. For example, in the case of the United States Steel Corporation, we have figures in each Annual Report giving separately "gross sales" of most of the subsidiaries to outside customers, and to other subsidiaries. Thus, in 1928, gross sales to outsiders were about 913 million dollars and those to other subsidiaries of the parent corporation were about 337 million dollars. The corresponding figures for 1929 were, for outsiders, about 980, and for other subsidiaries, about 375; and for 1930, 767 and 286. Altho these figures for United States Steel do not cover all of the subsidiaries, and are not strictly comparable with our item *gross income*, they give a good idea of the extraordinary extent to which the gross business of the constituents in a highly integrated enterprise may consist of dealings with other constituents. We note, however, that this corporation apparently includes *both* sets of sales figures in its "gross income."

Chart 9 shows comparisons similar to those of Chart 8, for income corporations. In a striking degree the relationships revealed by Chart 8 are modified in Chart 9. The chief generalization suggested by this chart is that for several divisions in one or more of the years the consolidated profit ratio is distinctly lower than the non-affiliated ratio. Even in the case of All Divisions Combined the consolidated ratio is the smaller in 1928, altho it is the larger in 1929 and 1930. The large Manufacture division has a consolidated profit ratio

CHART 9

Profit ratios, based on income corporations only, for all five divisions combined and each division; separately, for consolidated returns (solid black), non-affiliated returns (white), and both classes combined (shaded).



smaller in each year, altho the disparity between the consolidated ratio and non-affiliated ratio in 1929 is too small to be significant.

Certain of the remarks made above, concerning the validity of drawing inferences from these ratios as to the relative degree of prosperity of consolidated enterprises and non-affiliated enterprises, need not be repeated. They presumably apply with equal force to the indicated relationships in Chart 9. One difficulty, however, which was dodged in the case of Chart 8, is of importance here. The numerator of the profit ratio does not have the same significance for the consolidated returns as for the non-affiliated returns in this

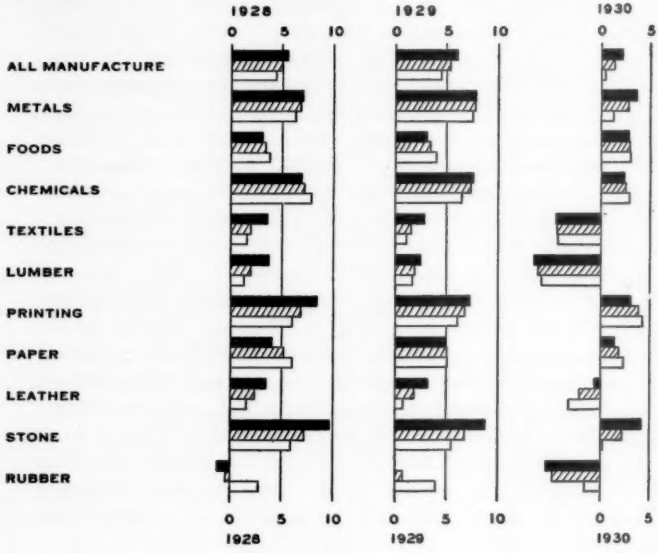
chart. As already noted, the net income reported in a consolidated return is a *net* figure in a special sense — it sets off deficits of certain constituents against net incomes of other constituents. The result is that the total net income reported by a consolidated return is different from what it would be if each constituent reported separately — it being understood that we are interested in the income corporations as a class. We may safely assume, accordingly, that the numerator for a given group of consolidated income corporations is smaller in the aggregate than it would be if the income corporations in that group filed individual returns. Therefore, presumably the profit ratio is reduced for these consolidated income corporations. We can not know the amount of this "technical" reduction, but we must have it in mind in the interpretation of the indicated disparities between the profit ratios of Chart 9. This consideration supplies an important confirmation of the indications of Chart 8. The very fact that we can account largely for the changes in the relative earning power, as between the consolidated class and the non-affiliated class, revealed by Chart 9 in comparison with Chart 8 constitutes a partial verification of the relationships implied by Chart 8. The indications of Chart 9 not only do not conflict with those of Chart 8; but, because of the "technical" consideration discussed above, they actually reinforce to a considerable degree the indications of Chart 8.

Profit Ratios: Manufacture Groups

The same kind of analysis has been made for the groups within the Manufacture division as is presented above for the major divisions. The profit ratios for the individual groups appear in Chart 10 — these figures being based upon income and no-income corporations combined. As was noted above, the consolidated profit ratio for the entire Manufacture division was somewhat higher than the non-affiliated ratio in each year. When we pass to the individual groups, however, we find no such consistency as appeared among the major divisions; altho the consolidated profit ratio stands above the non-affiliated profit ratio in several of the groups in all or certain years, there are important instances in which

CHART 10

Profit ratios, based on income and no-income corporations combined, for the Manufacture division and its groups; separately, for consolidated returns (solid black), non-affiliated returns (white), and both classes combined (shaded).



the reverse arrangement appears. In each year, the consolidated ratio stands below the non-affiliated ratio for Foods, Rubber, and Paper (altho the disparity is negligible for Foods in 1930 and Paper in 1929). In the case of Chemicals, the consolidated ratio is the lower in 1928 and in 1930, and the higher in 1929; and, as the petroleum refining industry is included in this group and comprises numerous large consolidated organizations, this shift in the Chemicals group may reflect changing fortunes of the petroleum industry. For Metals, Leather, and Stone, the consolidated ratio is the higher in all three years. For Textiles, Lumber, and Printing, the consolidated ratio is the higher in 1928 and 1929, but

the lower (probably not significantly for Textiles) in 1930.

This chart shows in a striking way the modifications in profit ratio, for all classes and groups, in the first year of depression. Not only were there numerous negative ratios, but there was a drastic reduction in most of the positive ratios, for 1930. The year 1930 also, as noted above, worked several changes in the relative magnitudes of the consolidated and non-affiliated ratios. The disruption, in the critical year 1930, of some of the relationships indicated for 1928 and 1929 points to the possibility that the cyclical readjustments incident to profound depression may work important changes in the relative earning power of the consolidated and non-affiliated classes. Here again it must be remembered that particular types of industry may fall more generally in the consolidated class than other types, and of course such particular types may be more responsive to cyclical readjustments.

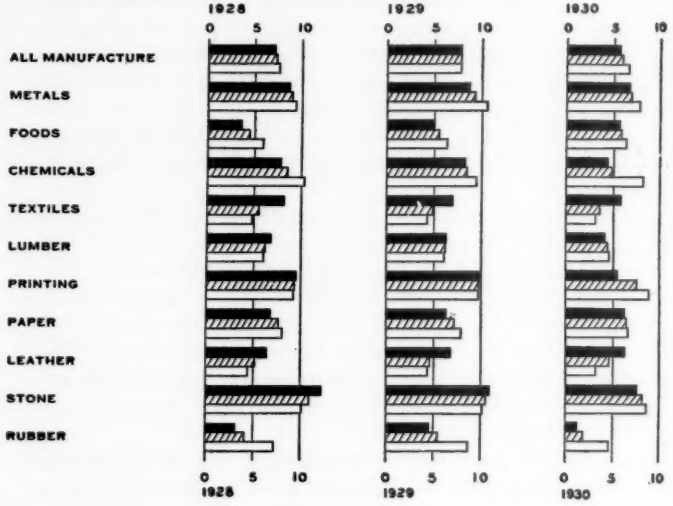
Another generalization suggested by Chart 10 is that the disparity between the consolidated ratio and the non-affiliated ratio, for any particular group, is often small. Exceptions appear in certain years for most of the groups. In a somewhat less conclusive way, therefore, the group results bear out the implication of the figures for the entire division; the indicated profitableness in manufacturing activities does not differ greatly as between consolidated enterprises and non-affiliated enterprises.

In Chart 11 are shown corresponding figures for the income corporations in the Manufacture division. Here also there is extensive diversity among the groups, as respects the relative magnitude of the consolidated and non-affiliated ratios. Here also, and to an even greater extent than was indicated by Chart 10, most of the disparities are not large. To say that the indicated disparities can be charged entirely to chance factors or to such "technical" causes as were outlined above, does not seem warranted; but it is exceedingly doubtful whether most of these disparities can be regarded as having definite economic significance. Perhaps additional information, giving certain details about the way the par-

ticular groups are made up and classified, would enable us to form a judgment on this point; but at present we can merely conclude that the difference between the consolidated profit ratio and the non-affiliated profit ratio is of little or no economic significance for most Manufacture groups.

CHART 11

Profit ratios, based on income corporations only, for the Manufacture division and its groups; separately, for consolidated returns (solid black), non-affiliated returns (white), and both classes combined (shaded).



Substantially the same observations concerning the validity of the indicated disparities as were made above in connection with Charts 8 and 9 can be extended to Charts 10 and 11. The refinement of classification as among groups within the Manufacture division may, it is true, be somewhat greater than that among the major divisions of industry. Nevertheless, we have here the same uncertainty as to whether the average of activities represented by the consolidated returns is comparable with the average of activities

represented by the non-affiliated returns. We have also the difficulties incident to the presentation of the consolidated figures in the *net* form, and there is considerable reason for believing that a high degree of integration may be somewhat more prevalent in the consolidated corporations in the manufacturing field than in other fields.

Rate of Profit on Gross Sales

The tabulations for the five divisions under investigation include data on "gross sales in manufacturing and trading," and also on the profit or loss from such sales. The profit, or loss, figure is obtained by deducting from the figure for gross sales the figure for cost of goods sold; and it is accordingly a fair approximation to the "gross margin of profit" in the usual accounting sense. By compiling these gross sales and gross profits figures for each division and each Manufacture group, I have calculated the per cent ratio of gross profits to gross sales. (The results appear in Table V.)

Table V. — Per Cent Ratio of Gross Profits on Sales to Gross Sales.

	1928			1929			1930		
	Both	Consolidated	Non-affiliated	Both	Consolidated	Non-affiliated	Both	Consolidated	Non-affiliated
All divisions*	22.4	23.7	21.5	22.9	24.2	21.9	21.9	23.1	20.9
Agriculture	37.4	49.2	32.5	36.5	45.4	32.2	36.7	62.5	27.4
Mining	30.7	30.6	30.7	33.2	32.2	34.5	28.4	26.1	31.5
Manufacture	24.3	23.5	25.2	24.7	23.9	25.6	23.1	22.9	23.2
Foods	18.0	16.4	20.4	18.7	16.6	22.1	20.2	20.1	20.4
Textiles	18.7	22.3	17.8	17.9	20.7	17.1	14.7	17.2	14.0
Leather	17.6	18.5	17.0	17.0	18.3	16.1	15.3	18.3	13.0
Rubber	21.1	13.0	42.9	22.6	22.0	25.3	21.4	21.1	23.0
Lumber	23.5	26.9	22.3	23.6	25.0	23.1	19.6	20.4	19.3
Paper	25.9	25.0	26.4	25.7	24.9	26.3	25.1	25.2	25.0
Printing	34.4	32.7	35.2	34.6	31.8	35.9	31.2	24.8	34.2
Chemicals	32.5	31.9	33.8	32.7	33.0	31.9	25.4	24.1	31.5
Stone	32.7	34.8	31.6	33.3	35.2	32.1	30.8	31.1	30.5
Metals	25.4	23.7	28.1	26.0	23.5	30.8	25.3	24.0	27.8
Construction	17.9	16.4	18.1	15.7	19.5	15.2	17.8	17.4	17.9
Trade	18.9	22.7	17.9	19.3	23.4	18.1	19.6	23.0	18.5

* Five divisions only.

These percentages, which appear separately for the consolidated corporations as a class, the non-affiliated corporations as a class, and both classes combined, afford another means of testing the comparative profitability of consolidated and non-affiliated enterprise. The percentages for all three years show about the same relationships: the non-affiliated ratio is smaller than the consolidated ratio for all divisions combined, it is smaller also for the Trade division, but it is larger for the Manufacture division. The differences for the three other divisions are less regular, altho in some instances more striking; and, in any case, they are less significant because Manufacture and Trade are the chief divisions.

Among the Manufacture groups certain regularities appear in the comparison of consolidated and non-affiliated ratios, for particular groups in all three years: the non-affiliated ratio is the higher for Foods, Rubber, Printing, and Metals; it is the lower for Textiles, Leather, Lumber, and Stone; but for Paper and Chemicals the relative size of the two ratios changes from year to year.

As in the case of the profit ratios, the question here arises whether the differences revealed signify any true difference in the profitableness of the two types of enterprise. The fact that the indications are opposite for the two chief divisions, Manufacture and Trade, may merely mean that in the one division the more profitable lines are in consolidated corporations whereas in the other division they are not. This condition — that the margin is higher for the consolidated than for the non-affiliated class in Trade, and lower for the consolidated class in Manufacture — is in accord with the indications of the profit ratios shown in Charts 8 and 9, in which the disparity in favor of the consolidated class is greater for Trade than for Manufacture. Bearing upon this condition is the situation revealed by Chart 5: Manufacture is much more generally consolidated than is Trade. We may interpret these facts as reflecting a tendency for consolidated enterprise to develop in Trade only in those cases most favorable to high return, but other possible explanations are so readily available that this particular interpretation is at best tentative.

The same comment can be made in regard to the opposite indication for the two lists of four groups each. But, even if we were to discount the diversity among the results in this way, there would remain a real question whether the differences themselves — many of them small — are significant. Because of the way in which the figures for gross sales and cost of goods sold are obtained, it seems probable that the comparison of these ratios of Table V is somewhat more indicative than the corresponding comparisons of profit ratios.

There is one basic difficulty which should be remembered in the interpretation of the data on gross sales and cost of sales. It has already been observed that the consolidated corporations generally are large; and, as there is internal evidence that large corporations handle their figures for compensation of officers somewhat differently on the average from small corporations, it is possible that the basis of reckoning cost of goods sold is systematically different for the two classes. No conclusive evidence on this point is available, but the probability that it has a bearing upon the data is so great that it should not be neglected in the interpretation of the data of Table V. This matter of practice in reporting compensation of officers is one of the several items, related to specific types of expenditure, which it is proposed to discuss more fully in another place.

General Conclusion

The investigation reveals that the consolidated-corporation data, in their present form, afford some evidence that consolidated enterprise enjoys in general a different rate of return on gross business from non-affiliated enterprise; but, on closer examination, the evidence is not striking. Some indications of differences in rate of return, particularly for specific industrial divisions or groups, are brought out; but it is so uncertain whether these differences are significant or are mainly ascribable to technical peculiarities of the data that no unmistakable general inferences can be drawn. We have, in the consolidated returns, data covering roughly one-half of all corporate business; but the way in which these

returns are made, or the way in which they are classified and tabulated, results in such a blurring of the indicated rates of profit that no clear comparisons can be made. The examination of the corresponding data for the non-affiliated corporations as a class, distributed by type of industry, fails also to show that the exclusion of the consolidated returns from the total greatly increases the precision of the industrial classification. Some such increase in precision is probably achieved, particularly with reference to classification into industrial divisions; but the internal evidence of improvement of this sort is not very strong.

The study has brought out clearly that consolidated returns come chiefly from large enterprises. On this point the fact that less than ten thousand consolidated returns report approximately one-half of the corporate business done by about half a million companies is striking evidence. We have also the fact that the total number of corporations included in the groups of affiliated companies making consolidated returns is not large; in other words, even the subsidiaries of these consolidated corporations must be very large on the average. Further evidence on size is developed above, where it is shown that a large percentage of the larger net incomes (or net deficits) is reported by consolidated returns. To the extent that the above analysis indicates a different rate of return for consolidated enterprise than for non-affiliated enterprise, it accordingly indicates a different rate of return for large enterprises than for small enterprises.[4] Until we can get fuller information concerning the type of industrial activity, it seems difficult to draw any certain conclusions on this point. We have noted above however that, with due regard for certain of the "technical" statistical effects upon the profit ratios, the several charts lend partial confirmation to each other; and this gives us considerable faith that the indicated disparity in earning power between

4. See a somewhat different analysis of this question, using different data, by H. B. Summers, "A comparison of the rates of earnings of large-scale and small-scale industries," this Journal, 1931–32, page 465. The findings of this study are not *necessarily* in conflict with those of Summers' study, altho they differ in important details.

the consolidated class and the non-affiliated class is significant and important. It is precisely when we regard the consolidated class as a sample — not a perfect sample, indeed — of large-scale enterprise that the indicated disparity in earning power appears most significant and dependable.

Some further qualifications may be noted. There is a danger that, within a given class, the consolidated returns may fall predominantly in one field of activity and the non-affiliated in another; and this leaves us in doubt whether differences in the profit ratios signify differences between consolidated and non-affiliated enterprise or merely between two related but not identical types of activities. A remaining possibility is that, when similar data become available for 1931–32, we may find in years of continued contraction and deep depression a sufficiently increased dispersion among the profit ratios to reveal significant differences which were not apparent during the three-year period of prosperity and crisis covered in the present study.

Altho continued study of the consolidated corporation data as now tabulated may prove helpful, it would seem that a much more satisfactory utilization of the data must wait for the elaboration and modification of existing tabulations, and the inclusion of new tabulations. Probably the revision of the existing tabulations of consolidated returns should aim to reveal more specifically the dominant type of industry and the relative importance of that type of industry. It is possible also that a classification of the non-affiliated returns, with a view to excluding from each industrial list those returns which do not have a very large share of their activity in that type of industry, would increase the precision of classification. The additional tabulations which seem most likely to be of use would include (1) data on the important balance-sheet items for the consolidated returns, classified by type of industry and possibly by size of corporation; and (2) data on the various income-account items, classified according to size of corporation.

Even with existing data we have secured tentative indications of significant differences in earning power between

consolidated enterprise and non-affiliated enterprise; and these indications are peculiarly significant in certain of the industrial divisions and groups. The present body of statistical information on the consolidated corporations furnishes a basis for instructive and suggestive analysis, and leads us to expect confidently that a more thoro classification and tabulation of these data or related data will furnish definite answers to some of the important questions which can now be answered only tentatively.

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THE RELATION OF CALL MONEY RATES TO STOCK MARKET SPECULATION

SUMMARY

Introduction, 449.— Brokerage office loan routine, 449.— Demand for funds inelastic at a given moment, 453; and over a period of time, 454.— Supply by "others" inelastic in 1927, 456.— Supply by banks elastic throughout 1927, 458.— New security issues the cause of increased demand for loans in 1928 and 1929, 460.— As a result of Federal Reserve policy, supply by banks inelastic after 1927, 461.— New security issues and high interest rates responsible for elasticity of supply by "others" in 1928 and 1929, 461.— Conclusion, 462.

It is sometimes said that the easy-money policy adopted by the Federal Reserve Board about the middle of 1927 initiated the stock market speculation that followed, the theory being that low interest rates stimulate marginal purchasing which in turn increases the total of brokers' loans. Such reasoning is based upon a misconception of the forces that determine a broker's demand for funds and upon an erroneous assumption that that demand is elastic under all conditions. The present paper proposes to point out the fallacies in these beliefs by making an analysis of the forces underlying demand and supply for funds in the speculative market.[1]

A detailed knowledge of brokerage office routine is prerequisite to an accurate analysis of the nature of a broker's demand for funds in the call money market.

In most brokerage offices the function of deciding just how much money is to be borrowed is assigned to the cashier. An investigation of this functionary's daily routine will reveal how his decision is made. For example, when the cashier of Thomas Moore & Company, a hypothetical brokerage firm, arrives at his desk at 9.00 a.m. on a Tuesday morning, his first act will be to inform himself regarding the firm's cash balance as of the close of business on the preceding day. Then he will ascertain the amount of the previous day's purchases

1. The author is indebted to the Social Science Research Council for a fellowship which enabled him to make this study.

and sales of securities, so as to estimate the firm's probable debit or credit balance at the Stock Clearing Corporation. It may be necessary for him to collect the data from several different sources, depending upon the particular type of bookkeeping system used. For example, he may learn the amount of the firm's transactions in "cleared" securities from the night clearing house blotter. If purchases of cleared stocks are assumed to be $1,248,200 and sales are assumed to be $1,254,300, Thomas Moore & Company's account in the day branch of the Stock Clearing Corporation will receive a credit of $6,100 if the firm successfully delivers all the shares which it has sold and actually receives all those which it has purchased.[2]

Next, the cashier may learn from the blotter of "non-cleared" stocks that the firm purchased, say, $31,600 and sold $25,100 of this type of securities during the preceding day. Consequently, the firm's day branch account will be debited for $6,500 when and if deliveries and receipts are made as contemplated.[3] Finally, a third blotter will disclose the amount of purchases and sales of non-cleared bonds. If for instance purchases of "non-cleared" bonds happened to total $3,800 and sales happened to total $2,900, their account will receive an additional debit of $900.

A balancing of these contemplated debits and credits will enable the cashier to estimate the firm's probable final clearing house balance which in this case will be a debit one of $1,300, i.e., $6,500 plus $900 minus $6,100. In other words, if deliveries and receipts are accomplished as planned,

2. It is not necessary for a broker actually to deliver and receive every certificate as agreed since many contracts to deliver are cancelled during the clearing process by contracts to receive the same issue. Thus he will deliver a number of shares equal to the excess of his sales in each issue over his purchases in that issue and will receive a number of shares equal to the excess of his purchases in each issue over his sales in that issue.

3. In reality the account will be debited for $31,600 and credited for $25,100, but since this is the same as a net debit of $6,500, the cashier may legitimately use the net figure in his estimate. Actual delivery and receipt of each share of "non-cleared" stocks and bonds are made regardless of the fact that a broker may have contracted to deliver and to receive an identical number of shares in some one issue.

Thomas Moore & Company will be able to settle all of the previous day's transactions with *one* check for $1,300, even if all the purchases were for margin accounts and all the sales were for outright owners. This payment will not need to be made, however, until 3 p.m. and the amount is almost certain to be altered before that time by failures to deliver and failures to receive. If the cash balance from the preceding day is assumed to be $152,341.58, the firm need not make immediate arrangements to borrow funds since this sum is quite sufficient to care for the small adverse clearing house balance which they anticipate.[4]

Suppose that at 11 a.m. the cashier learns that his firm will be unable to deliver the 200 shares of National Biscuit Company stock which it sold the previous day for $15,000. The reason for its inability to deliver may be that the certificates are in the possession of a transfer agent and will not be obtainable for several days. The rule in such cases is no delivery, no payment. Hence, the cashier's compilation of the firm's credits at the Stock Clearing Corporation is $15,000 too large and his preliminary estimate of cash required will be adjusted as follows:

Preliminary Estimate (adverse)	$1,300
Adjustment for Failure to Deliver	15,000
11.00 a.m. Estimate (adverse)	$16,300

Suppose now that the brokerage firm of Jones & Company notify Thomas Moore & Company that they will be unable to deliver 300 shares of General Foods, valued at $9,000, as per their agreement of the previous day. Since Thomas Moore & Company will not be debited for this $9,000 at the Stock Clearing Corporation, as the cashier estimated, another adjustment will be necessitated by this development.[5]

4. It should be pointed out, however, that brokers do not always have such small clearing house balances and that Thomas Moore & Company might have found it advisable to arrange a loan immediately if their adverse clearing house balance had appeared likely to be large. On the other hand, brokers often have credit balances at the Stock Clearing Corporation, in which case they do not need to pay anything.

5. This is not strictly true, of course. The firm's night clearing house balance, i.e., $1,300, will have included the $9,000 debit, but an off

11.30 a.m. Estimate (adverse)	$16,300
Adjustment for Failure to Receive	−9,000
12.00 m. Estimate (adverse)	$7,300

During the day Thomas Moore & Company will receive and disburse cash for a number of purposes other than settling clearing house balances. The cashier will keep informed of the cumulative amounts of such receipts and disbursements and will adjust his cash estimate from hour to hour as the balance of cash in or out fluctuates. Suppose the records indicate that the following receipts and disbursements have been recorded up to 2 p.m.

Receipts:	$147,600	received from customers to be credited to their trading accounts.
	12,000	received from the United States Steel Company to cover the quarterly dividend on shares of stock registered in the name of Thomas Moore & Company but actually owned by customers of the firm.
Disbursements	$256,700	paid to customers and charged to their trading accounts.
	3,500	paid to the odd lot firm with whom Thomas Moore & Company deal to settle for Monday's transactions which included purchases of $172,400 and sales of $168,900.

The cashier's 2 p.m. estimate will then appear somewhat as follows:

Cash Balance from preceding day		$152,341.58
(1) Preliminary estimate (adverse)	$1,300	
Adjustments:		
(2) Fails to deliver	15,000	
(3) Fails to receive	−9,000	
(4) Odd lot dealings (net)	3,500	
(5) Receipts from customers	−147,600	
(6) Disbursements to customers	256,700	
(7) Dividends received	−12,000	
2.00 p.m. Cash Needs	$107,900	
(8) Loan from bank (to be arranged)	100,000	
Probable decrease in cash balance during the day		7,900.00
Probable Cash Balance at close of day		$144,411.58

setting credit resulting from the failure to receive will make the final balance the same as tho the debit had not been made.

Assuming that Thomas Moore & Company desires to maintain their bank balance in the neighborhood of $150,000, a loan of $100,000 must be arranged before the end of the day.[6] This loan may be paid to the Stock Clearing Corporation in which case items (1), (2), (3) and (8) above will be lumped together by that institution and Thomas Moore & Company will receive a check for $92,700 from the day branch at 3 p.m. A summary of the cash transactions for the day is exhibited below.

CASH ACCOUNT OF THOMAS MOORE & COMPANY

Debits		
Balance (at beginning of Tuesday)	$152,341.58	
Receipts:		
S. C. C. check	92,700.00	
Customers' checks	147,600.00	
Dividend check	12,000.00	
		$404,641.58
Credits		
Checks written:		
To Customers	$256,700.00	
To Odd Lot Dealer	3,500.00	
Balance	144,411.58	
		$404,641.58
Balance (at close of day)		$144,411.58

In the illustration used above, Thomas Moore & Company's demand for loans was $100,000 because their disbursements exceeded receipts by $107,900 and because they did not wish to reduce their bank balance much below the amount then carried. If the call money rate had dropped to 1 per cent, their demand for loans would have remained $100,000 for the reason that they did not need more than this sum. If the call money rate had soared to 20 per cent, their demand for funds would still have remained $100,000 because they could not do with less than this sum. It should be clear therefore that the amount of loans needed by an individual broker

6. Had the cashier's estimate shown an increase in cash instead of the decrease, the firm would have arranged either to reduce their outstanding indebtedness or to loan the excess funds at call.

on a given day is not dependent upon the market rate of interest. The demand is for the amount needed at any price. A broker's demand curve on a graph where the "x" axis represents amounts and the "y" axis represents interest rates would appear as a line drawn perpendicular to the "x" axis and the demand curves for successive days would be shown as a series of parallel lines scattered to the right or left of the first line according as the amount demanded on those days happened to be a greater or smaller sum than that demanded on the first. The question then arises as to whether a high call money rate on a given day tends to cause the demand curves on the following days to shift to the left; that is, does a high interest rate result in a decreased future demand for funds, or, in other words, is the interest rate a causal factor in the long run demand for brokers' loans?

It has been shown that an individual broker's demand for loans is determined by the excess of his daily disbursements over his daily receipts. The aggregate demand for loans is the sum of the individual demands. However, certain factors which tend to increase one broker's demand result in a reduction in another broker's demand and thus do not affect the total demand. A payment to the day branch of the Stock Clearing Corporation is an example. It is true that adverse balances at the day branch increase the loan demand of individual brokers, but it is also true that favorable balances at the day branch reduce the loan demand of other brokers. Since the total of the adverse balances is always the same as the total of the favorable balances, it follows that the aggregate demand for loans by brokers is neither increased nor decreased by clearing house transactions. Thus payments to and receipts from the Stock Clearing Corporation really represent a shift of existing loan obligations from one set of brokers, those with favorable balances, to another set of brokers, those with adverse balances. They may, therefore, be eliminated from consideration as factors that affect demand. This leaves customers' cash withdrawals (in excess of

their deposits) as the primary factor responsible for the aggregate demand for brokers' loans.

Brokers borrow when customers with credit balances choose to withdraw cash. The extent of such withdrawals is conditioned by the amount of credits standing in customers' accounts. If a high rate of interest is to reduce brokers' demand for loans, it must in some way cause traders with credit balances to leave those credits with brokers or to cancel them by debits resulting from stock purchases. The interest charges on brokers' loans are pro-rationed among traders with debit balances. If such charges become burdensome to traders, they may reduce their balances by (1) depositing cash (an unlikely procedure) or (2) selling some of their holdings. If the latter results, the stocks may be purchased by the customers with credit balances in which case the transfer would result in a reduction of the debit balances of marginal traders and in a reduction of the credit balances of other traders. When a customer reduces his credit balance by stock purchases he also reduces his ability to withdraw cash. Thus, to the extent that increased interest charges force marginal holders to sell and encourage traders with credit balances to buy, the interest rate may affect the future demand for loans by brokers.

The relation of call money rates to demand for funds may then be summarized as follows:

(1) Brokers demand loans when customers with credit balances withdraw cash.
(2) The interest charges on these loans are passed on to customers with debit balances.
(3) If the interest cost becomes burdensome, customers with debit balances may either:
    (a) Deposit additional cash, or
    (b) Sell stocks.

The crux of the whole matter therefore depends upon whether or not interest charges can be made so burdensome as to induce marginal holders to sell. If they can, the demand for loans is elastic over a period of time, and if they cannot, the demand for loans is inelastic over a period of time.

The burdensomeness of interest costs to margin holders depends upon the rate of appreciation of stock values. To illustrate, suppose that a trader purchased 100 shares of North American Company common stock in 1928 when this stock was selling at 71⅞. The purchase would have resulted in a debit to the trader's account of $7,205 (including $17.50 commission) upon which interest would have been charged at the market rate. Suppose this rate to have averaged ten per cent. If so, it would have been necessary for the market value of North American Company stock to appreciate at the rate of 2½ cents per share per day in order to offset the interest charges. The actual rate of appreciation in 1928 and 1929 was 25 cents per share per day; that is, ten times greater than the rate needed. Under such conditions an interest rate of 100 per cent would have been required to force marginal holders of North American common to sell.[7] In a period of relatively stationary or declining prices, a 10 per cent interest charge may be sufficiently burdensome to discourage traders from holding large debit balances. But in a period of appreciating stock values interest charges are of minor importance to marginal speculators. The long and short run demand for brokers' loans is inelastic at such times.

The market supply of a good may be divided into two parts: The first containing the intra-marginal portion which is offered regardless of prevailing prices and the second containing the elastic portion which is added to or subtracted from the market supply according as prices move up or down. When the statistics of supply in a particular case are subdivided according to sources it is sometimes possible to determine the relative elasticity of the various subdivisions by noting the amount supplied at different prices. For example, if it be found that the quantity offered by a group increased steadily during a period in which prices declined, one may safely surmise that at least this portion of supply was inelastic.

7. Stated in another way, North American stock would have had to appreciate at the rate of $7.25 per share per year to meet the interest charges. The stock sold at 22 in 1924 and at 186 at one time in 1929 which gives it an average yearly appreciation of $27 per year over a seven year period.

In 1927 loans to brokers by others increased steadily from January to December. The call money rate during this period, however, remained relatively steady. It declined from 4.32 per cent in January to 4.03 per cent in February, then advanced to 4.33 per cent in June, then declined to 3.68 per

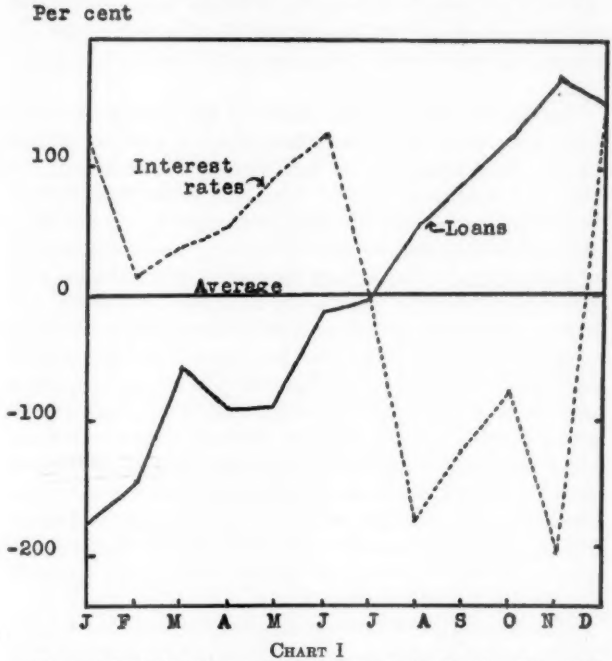

CHART I

Per cent deviation from average of loans to brokers by others and call money renewal rates in 1927.

cent in August and ended the year at 4.38 per cent. The lack of correlation between changes in loans by others and changes in the call money rate is clearly shown on Chart I. The only possible conclusion is that the funds contributed by others to the total supply at this time were not attracted to the money market by the interest rate. Most probably they were

invested temporarily in call loans for liquidity reasons. In other words, yield was not a causal factor in supply by others. This was to be expected, however, since the call money rate fluctuated between 3½ per cent and 4½ per cent, a rate too low to be an attractive investment for corporate funds. At any rate it is certain that the funds loaned by others in 1927 did not constitute that elastic portion of supply which expanded and contracted in response to changes in the interest rate.

Let us now turn to bank loans. If the average monthly bank loans to brokers during the first half of 1927 are plotted on a graph in which the "x" axis represents amounts and the "y" axis represents interest rates, the points thus located will describe an almost straight line rising slowly to the right, thus indicating a high linear relationship between the amount of funds loaned by banks and the market rate of interest. If the average monthly bank loans to brokers during the last half of the year are plotted, another almost straight line rising to the right results. The second line, however, is located lower on the graph (Chart II) than the first. The curves thus drawn may be taken as rough approximations of the bank supply schedule for call money in 1927, the upper line representing the supply curve for the period in which the Federal Reserve Board pursued a tight-money policy and the lower line representing the supply curve for the period in which the Federal Reserve Board pursued an easy-money policy. As the graph shows, the chief effect of the change in policy was a general lowering of the whole supply curve.

The demand for call money has already been shown to be impervious to changes in the interest rate at times when stock prices are rising. During 1927 the Standard Statistics Price Index of 421 stocks rose steadily from the fourth week in January to the last week in December. The demand for funds must therefore have been inelastic throughout this period. If so, the amount actually borrowed in each month represents the amount demanded by brokers at any price. The demand schedules for each month form a series of parallel lines which rise vertically above the amounts actually borrowed in each

month (see Chart II). The points at which these lines intersect the two supply curves indicate the theoretical call money rates set by an elastic supply and an inelastic demand. It will be noted that the actual rates for each month coincide

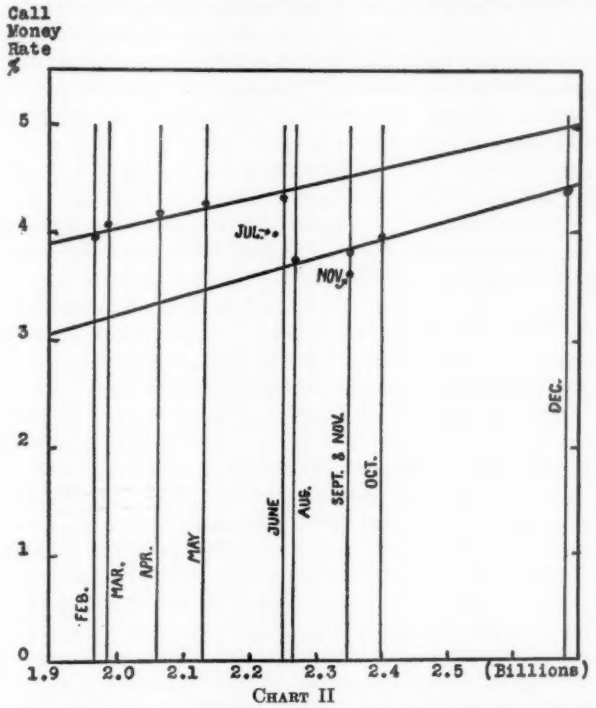

CHART II

Monthly Supply and Demand Curves in Call Money Market in 1927. (Vertical lines represent the demand and horizontal lines represent the supply.)

very closely with the theoretical. Some idea of what call money rates would have been during the latter half of 1927 had the Federal Reserve Board not embarked upon a policy of easier money may be obtained by noting where the demand lines for these months intersect the extension of the upper

supply curve. The almost inevitable conclusion that will result from a comparison of these estimations with actualities is that the policy of the Board did not increase the quantity of funds loaned to brokers, but merely decreased the price asked, for in the case of brokers' loans demand sets the quantity and supply sets the rate. The Board's policy, therefore, did not initiate the increase in brokers' loans, but merely permitted brokers to secure the quantity of funds which they would have secured anyway at prices lower than they otherwise would have had to pay.

In 1928 the situation was different. Stock prices were still rising; hence the demand of brokers must have still been rigidly inelastic. The rate at which the demand curve was shifting to the right was accelerating, indicating that *someone* was selling huge quantities of stocks and withdrawing cash. Of course thousands of persons sold stocks in 1928, but most of them used the proceeds of the sales to accumulate other shares. Certainly this was true of the speculative activities of the general public, and a perusal of the stock holdings of investment trusts at the beginning and the end of the year leads to the conclusion that it was likewise true of this group. Transactions of this nature do not affect the total of brokers' loans.[8] But some group must have sold stocks without repurchasing for the total of brokers' loans did increase. During 1928 and the first nine months of 1929 corporations whose stocks were listed on the New York Stock Exchange are known to have printed and sold shares of new issues for which they received $3,042,120,000 in cash. Here, at least, is one group that did not devote the proceeds of their stock sales to the purchasing of other shares. The withdrawals of cash by these and by other public utility and industrial corporations that were floating new stock issues must have directly or indirectly augmented the demand for funds by brokers.[9]

8. See the author's article, "The Economics of Brokers' Loans," in the American Economic Review, March, 1932, p. 71.

9. It was not necessary for the new issues to be bought on margin in order that the total of brokers' loans be affected. It only required that the new issues divert to corporations some of the funds which otherwise would have been deposited with brokers or that their issuance

At the same time that the new security issues of corporations aided by a small amount of profit-taking by speculators was increasing brokers' demand for funds, the shift in the attitude of the Federal Reserve Board towards speculative loans was altering the nature of the supply curve. As a result of Federal Reserve policy, of public opinion, and of the Senate investigation of brokers' loans, banks were fast becoming unwilling lenders to brokers. This change was expressed not so much in attempts to contract loans already made as in refusals to extend additional loans.[1] In other words, a supply from banks beyond the three billion mark was not forthcoming at any price. Consequently, as the vertical demand line approached the three billion point, it encountered a supply curve rapidly becoming almost as steep as itself. The result was a rise in the call money rate which, had it not have been for a forthcoming supply from another source, might have soared as high as 20, 50, or even 100 per cent.[2]

The new source was of course "others." As a result of new security issues, corporations were coming into possession of a far greater amount of money than was needed by them for production purposes. This was occurring just at a time when call money rates were rising because of the growing inelasticity of supply. A yield of 6, 7, 8, or 9 per cent, combined with the high degree of liquidity for which loans to brokers are known, proved to be too strong a temptation for the corporations. As a result the call loan supply by others began to absorb in December, 1927, the elasticity which the Federal Reserve Board was squeezing out of the bank supply so that after this date the funds contributed by others became the elastic portion of total supply that responded to changes in the market

caused some traders to sell a part of their holdings of other securities so as to secure the funds needed to purchase the new issues. For further development of this point, see the author's article, "The Economic Significance of Brokers' Loans," in the Journal of Political Economy, October, 1932, p. 684.

1. Total loans to brokers by banks never rose much above the total reached in January, 1928.

2. Such an occurrence would not have been without precedent for call money has been known to loan at 1100 per cent.

rate. Line "a" in Chart III represents the accumulated cash receipts from common stock flotations of corporations whose stocks were listed on the New York Stock Exchange. Line "b" in this chart represents the accumulated loans to brokers made by others through reporting member banks in New York City. The close convergence of the two curves and the identical amplitude of their rise suggests that a large amount

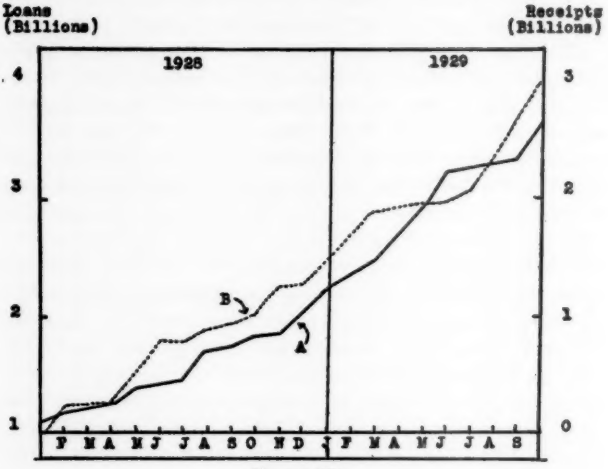

CHART III

A, Accumulative cash receipts from sale of new shares by corporations whose stocks were listed on the New York Stock Exchange; B, Loans to brokers by others through New York City reporting member banks.

of the funds loaned to brokers were secured through the flotation of new security issues. Hence, the security issues of 1928 and 1929 were at the same time the stimuli for the increased demand for funds and the source of the increased supply.

It is clear, therefore, that the Federal Reserve Board had no regulatory powers over the forces which were really responsible for the huge increase in speculative loans. No action that they could have taken would have been of any

avail under the circumstances. Stock prices were soaring at such a rate as to make the demand for funds absolutely impervious to changes in the call money rate. Had the Board not put pressure upon banks to withhold further aid, those institutions would probably have gone on supplying the funds which brokers demanded. As occurred, however, the Board's attempt to cut down on the supply of credit available to speculators merely caused the call money rate to advance to a point where the funds demanded were forthcoming from other sources. The Board's failure in this instance does not mean that brokers' loans should go unregulated in the future, but only illustrates the uselessness of attempting to regulate the supply when the demand is inelastic.[3]

WILFORD J. EITEMAN.

ALBION COLLEGE

3. The present author's conclusions are not essentially different from those of others. For example see: Owen and Hardy, Interest Rates and Stock Speculation, 1930 ed., chs. VIII, IX, X, and XI; J. M. Keynes Treatise on Money, ch. XV; C. A. Dice, New Levels in the Stock Market, p. 160: and Gustav Cassel, in the Quarterly Reports of the Skandinaviska Kreditakiebolaget, Oct. 1928 and April 1929.

ONE YEAR OF THE RECONSTRUCTION FINANCE CORPORATION[1]

SUMMARY

Basic Factors, 464.— Antecedent Events, 465.— Objectives, 468.— Structure, Powers, and Duties, Original Act, 469; Amended Act, 472.— Operations, 475.— Results and Conclusions, 484.— Appendix, 488.

I

A radical reduction of market values for securities and other forms of property has been a feature of each major business cycle. In the present period of readjustment there are two additional basic factors which help to explain the use of extraordinary governmental measures in attempting amelioration.

First, the *relative* fixity of wages, particularly of railroad and of other types of well-intrenched labor, has antiquated, for the time being at least, the conventional definition of "fixed charges." Coupled with the effective determination of the political majority to shift heavier social burdens permanently by higher taxes on corporate net incomes and on the larger individual incomes and estates, it has come about that the problem of restoring net earnings, and security and property values, is not as simple as heretofore. Unadjusted wages, as well as permanently increased tax levies, were negatively capitalized in arriving at nominal capital valuations. The resultant depressing effect upon security values intensified the cyclical reduction and increased the strain upon banks having large holdings of, or loans upon, long-term securities.[2]

Second, the framework or structure of banking in the United States has been undergoing revolutionary change. Perhaps it would be more accurate to say that a *long* cycle of

1. Hereinafter referred to as "the Corporation," the initials "R.F.C." being used in some footnotes and tables.

2. All in all, the current shrinkage of nominal capital values has been well over 50 per cent in the aggregate, losses on different units of property varying widely owing to prior differences in net worth to debt ratios.

banking credit inflation-deflation has been operating in the United States, and that the contraction phase coincided with other untoward events to complicate the problem of recovery. The Gold Standard Act of March 14, 1900, reduced the amount of capital required to start a national bank, encouraged the widespread establishment of many new, moderate-sized national banks, and promoted the "coinage" of a rapidly increasing volume of private and public property into deposit currency as purchasing power. Such expansion was sustained and further stimulated, for state as well as national banks,[3] by the Federal Reserve Act of December 23, 1913, which enlarged the pyramid of deposit currency that could be built upon any given quantity of reserve material. Either one of these acts possessed sufficient inflationary power to set up a chain of events distorting contemporary judgments of "normal" and requiring redress by a substantial reaction.

The rapid growth of bank credit in the United States after 1900 probably had as great an influence upon the world price level as did the new gold to which so much attention has been directed in the economic histories of that period. The sustained price rise tended to make all loans, and therefore all banks, "money good." The American public developed such an assurance of general banking stability that new low records were established for the ratios of the totals of banking capital to liabilities and of specie reserves to bank deposits.

Statutory provisions for regulation were defective, however, and supervising authorities were delinquent in not insisting that banks set aside adequate capital reserves from profits to cover the long-run average of losses. The deficient margins of safety for banks were weakened by a series of post-war influences such as the "unexpected" recession of commodity prices from the war peak, changes in highway transportation and merchandising methods which shifted some of the local patronage of banks to larger centers, and the absorption of valuable sources of profit by the Federal reserve banks and Federal farm loan banks. In consequence, there was a decline in the number of banks, beginning in 1921–1922.

3. See Table I in Appendix.

Banking deflation, at first sporadic, continued thereafter and no important steps were taken to restore the crumbling structure of banks. The cumulative effects of the long series of bank failures were to undermine confidence in all banks and to retire a large portion of the deposit currency from circulation.

The statistics of bank closings indicate that the readjustment in our banking structure was proceeding in an orderly manner until November, 1930. Then closings were accelerated, public confidence in banks was severely shaken, and domestic hoarding of currency began.[4] Supervising officials, prominent bankers, students of banking, and the leaders in the administration at Washington had been apathetic as to bank failures. Ostensibly, they were imbued with the superficial belief that the country had "too many banks" and that some vagrant stimulus would arrive soon enough to effect a restoration of business and values before a universal banking collapse. Depositors refused to accept the same stoical attitude; bank closings increased in size and currency hoarding became notorious in the second half of 1931.[5]

II

The Reconstruction Finance Corporation had its proximate beginnings in these events of 1931, and especially in the plans formulated for the National Credit Corporation and the Railroad Credit Corporation.[6] There was a growing appre-

4. During November the public became aware of attempts being made to save the unfortunate Bank of United States, which closed December 10, 1930, with about $200,000,000 of deposits, the largest bank in the United States ever to suspend payments.

Hoarding was not revealed in the statistics of money in circulation at this stage because business and price recessions were releasing currency to hoarders.

5. See Table II in Appendix.

6. The National Credit Corporation, a private organization perfected early in October, 1931, was designed to provide a means whereby voluntarily associated banks owning its stock and purchasing its debentures would provide liquidity for such of the associated banks as needed, but could not obtain, rediscounts. The Railroad Credit Corporation, formed in December, 1931, was a device for receiving and lending the proceeds of a temporary freight rate surcharge, the loans to be made to such rail-

ciation of the fact that an organization was needed not merely to provide liquidity for banks and railroads, but rather to assume the risk of loss — *and the losses* — in a situation wherein no one could give an assurance as to the date when adjustment would be completed.[7]

The customary opposition to governmental assumption of business risks was considerably mollified by emphasis upon the alleged need for liquidity and by reference to precedent. The plan of capital structure, governmental subscription, organization, management, and types of transactions to be performed by the Corporation were closely similar to those of the War Finance Corporation as organized May 20, 1918, for war purposes, and as amended August 24, 1921, and later extended, for the financing of agricultural exports and advances to distressed banks.[8] The only substantial innova-

roads not in the hands of receivers as could not otherwise meet their immediate cash requirements whether for capital maturities or on current accounts, including interest charges.

"As of the close of January [1932] it was reported that the [National Credit] corporation had made 644 loans to 560 banks, the total loans and commitments amounting to $144,000,000."— Wall Street Journal, March 1, 1932, p. 14.

7. In the discussions preceding adoption, it was found difficult to justify the organization of the Corporation without an implied admission that losses would have to be taken. Cf. Hearings before a Subcommittee of the Committee on Banking and Currency, United States Senate, 72d Congress, 1st Session, on S. 1, pp. 1–229 (December 18, 19, 21, 22, 1931).

The first chairman of the Board of Directors of the Corporation, Charles G. Dawes, upon the date of his confirmation as a director by the United States Senate, was reputed to have announced that the policy of the Corporation would be to stress "intrinsic values" and not to be bound by market quotations of collateral in making loans to financial institutions. Cf. Wall Street Journal, January 29, 1932, p. 1.

A policy of liberality in risk taking on a selective rather than a comprehensive basis was found to be especially difficult to administer and the Corporation gave a prominent position in its publications to Section 16(a) of the Act which states: "Whoever makes any statement knowing it to be false, or whoever willfully overvalues any security, for the purpose of obtaining for himself or for any applicant any loan . . . shall be punished by a fine of not more than $5,000 or by imprisonment for not more than two years, or both." See Circular No. 1 of the R. F. C., "Information for Banks, . . ." February, 1932, p. 4.

8. "The amount advanced . . . for all purposes, from its creation in May, 1918, to April 4, 1929, was $690,431,100, of which $688,232,000

tions in the original Reconstruction Finance Corporation Act of January 22, 1932,[9] were the greater volume of funds provided, and the inclusion of railroad financing, which had been performed directly by the Treasury during the War.

Adherence in the main to the practices of the War Finance Corporation and of the Treasury in its relations to railroads during the War characterized the first six months of the Corporation. Thereafter, by amendments contained in the Relief and Emergency Construction Act of 1932 which became a law on July 21, 1932,[1] unprecedented changes were made in the objectives, scope, and magnitude of the Corporation's activity. The objectives sought by the original act of January, 1932, were purely defensive; the amended act of July, 1932, contained some features that were positively constructive.

III

The primary objective of the original act was to provide loans which could not be obtained through regular banking channels owing to near-panic among the banks. Each bank, by seeking to improve its own liquidity for anticipated runs or to avoid losses, was destroying liquidity and values for all banks in general. It was hoped that security values, particularly for the railroads, could be supported until business recovery would restore former methods of securing short-term and long-term funds.[2] Indirectly, such a restoration of general security values would preserve the solvency of the various kinds of banks having large bond portfolios carried at

had been repaid on that date."— Annual Report of the Secretary of the Treasury, 1929, p. 257.

9. C. 8, 47 Stat. 5.

1. C. 520, 47 Stat. 709.

2. Undersecretary (later Secretary) of the Treasury, Ogden L. Mills, stated on January 24, 1932, ". . . the outstanding fact today is that deflation has proceeded much too far. Every additional decline in credit and prices and securities brings with it further bank failures, and bank failures in their turn lead to further contraction in credit and prices. . . .

". . . The calamitous process of deposit and credit contraction must be arrested. The flow of funds from all parts of the country to the financial center should be reversed. The full use of available credit should be encouraged . . ."— Commercial and Financial Chronicle, 134:784–785 (January 30, 1932).

cost prices which were substantially in excess of market values. A selective guaranty of bank deposits for approved banks through loans on approved security was thought to be preferable to a general guaranty; and loans to approved railroads upon approved security were thought to be preferable to outright government assumption or ownership. That all bank and railroad debts were not assumed meant that losses would have to be taken by some of the unaided; but support to the general situation through aid to key concerns was expected to defer the liquidation of as many debts as possible, while full opportunity would be afforded for receiving the utmost benefit from eventual business recovery.[3]

The chief objective of the amended act was, on the other hand, to provide direct and positive stimulus to business revival through capital loans for new construction. The purely defensive features were retained and indeed strengthened by authorizing loans to the states for relief to meet the increasing tension of unemployment.

IV

The organization devised for achieving the stated objectives had, throughout, all the earmarks of an emergency institution of broad powers planned to function for a limited period.

3. In signing the bill creating the Corporation, President Hoover said: "It brings into being a powerful organization with adequate resources, able to strengthen weaknesses that may develop in our credit, banking and railway structure, in order to permit business and industry to carry on normal activities free from the fear of unexpected shocks and retarding influences.

"Its purpose is to stop deflation in agriculture and industry and thus to increase employment by the restoration of men to their normal jobs.

"It is not created for the aid of big industries or big banks. Such institutions are amply able to take care of themselves. It is created for the support of the smaller banks and financial institutions and, through rendering their resources liquid, to give renewed support to business, industry and agriculture. It should give opportunity to mobilize the gigantic strength of our country for recovery."— New York Times, January 23, 1932, p. 1.

This statement is an excellent illustration of the policy, pursued throughout, of attempting to create a favorable state of mind upon the part of the general public by ignoring and obscuring the facts.

The original act of January, 1932, set up a potential fund of 2 billion dollars obtainable by the sale of capital stock of 500 million dollars to the United States Treasury, and by the issuance of notes, debentures, or bonds not exceeding 1½ billion dollars. These obligations were to mature in five years or less, were ineligible either for discount or purchase by any Federal reserve bank, and were to be sold to the public with the guaranty of the United States or purchased by the United States Treasury. During the first year all issues were purchased by the Treasury.

The management of the Corporation was vested in a Board of Directors of seven members, consisting of the Secretary of the Treasury, the Governor of the Federal Reserve Board, the Farm Loan Commissioner, *ex officio*, and four other presidential appointees with two-year terms. The Board was given almost complete discretionary power as to personnel, organization, expenses, and rates of interest to be charged.

The Federal reserve banks were "authorized and directed to act as depositaries, custodians, and fiscal agents" for the Corporation. Regional loan offices were set up in each of the Federal reserve bank and branch cities, advisory committees and a paid manager being appointed for each of such loan agencies. Local operations were conducted wherever possible on Federal reserve bank premises. Loans were made, collateral held, and collections made at these agencies; only loans to the railroads, farm loan banks, and Federal intermediate credit banks were made at the main office in the District of Columbia.[4]

The charter was granted for a 10-year period. The making of loans was limited to a one-year period, but the President of the United States was given authority to extend the loaning period for two additional years.[5]

4. Statement made by Jesse H. Jones, member of the Board of Directors of the Corporation, quoted in the Commercial and Financial Chronicle, 135:1760 (September 10, 1932).

5. By proclamation dated December 8, 1932, the President extended the loaning period to the utmost, terminating (unless there should be amendatory legislation) at the close of business on January 21, 1934.

Advances of the Corporation's credit and funds were authorized in four forms: (1) acceptances of bills of exchange, (2) loans to be administered by the Secretary of Agriculture, through his own agencies, (3) loans direct to railroads, and (4) loans direct to banks and financial institutions.[6] Direct loans were not to be made for terms over three years, but extensions could be granted not to exceed five years from the

6. Acceptances of bills of exchange were limited to those arising out of the export of agricultural or other products actually sold or transported for sale, other than armaments, "munitions or other war materials or . . . into countries . . . at war . . . except food and supplies for the actual use of noncombatants," having maturities of 12 months or less, payable in dollars, and secured by American collateral, or guaranteed by a United States bank or trust company, and not secured by goods stored in or in process of shipment in foreign countries. Very limited use was made of this power.

For loans through the Secretary of Agriculture, one-tenth of all funds produced by the sale of capital stock and debt obligations were segregated. Such loans were to be limited to farmers for the purpose of continuing crop production in the year 1932, preference being given to farmers with crop failures in 1931. The Secretary of Agriculture could in his discretion accept as "sufficient security" first liens on crops growing or to be planted. Restrictions designed to prevent expansion of production were included in the regulations announced by Secretary of Agriculture Hyde, on February 11, as governing the loans to be made for crop production during the year 1932. Loans would not be made for single farm acreages exceeding the average of 1930 and 1931, to persons not operating farms in 1931, for summer fallowing, for acreages of cotton or tobacco in excess of 65 per cent of that planted in the spring of 1931 (excepting producers of 10 acres or less of cotton and of three acres or less of tobacco), for sums over $400 to one applicant, to persons having a means of livelihood other than farming, nor in states where the Secretary of Agriculture had not determined an emergency to exist as a result of which farmers could not obtain loans from other sources.

Direct loans to railroads were to be made "upon approval of the Interstate Commerce Commission" to aid in ". . . temporary financing of railroads and railways engaged in interstate commerce . . . in process of construction, and to receivers of such railroads and railways when . . . unable to obtain funds upon reasonable terms . . ."

Direct loans "to aid in financing agriculture, commerce and industry . . . [or the] . . . exportation of agricultural and other products" could be made to any bank, savings bank, trust company, building and loan association, insurance company, mortgage loan company, credit union, Federal land bank, joint stock land bank, Federal intermediate credit bank, agricultural credit corporation, live stock credit corporation, or receiver of a closed bank. The amount of direct loans to receivers of closed banks was limited to 200 million dollars, altho it was known that the nominal assets of closed banks exceeded 4 billion dollars.

original dating. No one corporation with its affiliates could borrow more than 100 million dollars. The advances to railroads were to be "adequately secured," the export bills of exchange accepted were to be "secured fully," and the advances for financing agriculture, commerce, and industry and for facilitating the exportation of agricultural and other products were to be "fully and adequately secured," but no loans whatsoever could be made upon foreign securities or foreign accounts as collateral or to carry or liquidate foreign securities or foreign accounts. Direct loans, whether to banks, other financial institutions, or railroads, were subject to the restriction that *no loan should be made "for the purpose of initiating, setting on foot, or financing any enterprise not initiated, set on foot, or undertaken prior to the adoption of this act"* excepting agricultural operations or loans to agricultural credit institutions. This restriction belied the word "reconstruction" in the title.

For the protection of the public interest, it was thought sufficient to require the publication of quarterly reports "stating the aggregate loans made to each of the classes of borrowers and the number of borrowers by states in each class," the assets and liabilities, and the names and compensation of all employees receiving over $400 a month.

Of minor details, only a few call for mention. A number of privileges, usually limited to governmental agencies, were granted to the Corporation, such as tax exemption, free use of the mails, qualified access to the records of other United States agencies and departments to obtain information as to borrowers, the use of the Bureau of Engraving and Printing for preparing security issues, and the right to act as a public depositary (except as to customs).

The foregoing organization was remodeled, with numerous substantial changes, by the amended act of July, 1932. The total of the potential loan fund was increased to $3,800,000,000, the additional $1,800,000,000 to be provided wholly by debt obligations of the Corporation. Separation of the Corporation from the Federal reserve system was made complete by removing the Governor of the Federal Reserve Board, as

well as the Farm Loan Commissioner, as *ex officio* members of the Board of Directors, without reducing the number of members of the Board. The limitation of loans to projects set on foot before the enactment of the act was removed and new forms of lending were added.

The new forms in which the Corporation could lend its funds consisted of: (1) loans to states and territories, or to municipalities or political subdivisions thereof, "to be used in furnishing relief and work relief to needy and distressed people"; (2) certain loans for projects classified as "self-liquidating"; (3) loans to finance sales of agricultural surpluses in foreign markets; (4) loans to *bona fide* institutions financing the carrying or orderly marketing of agricultural commodities or live stock produced in the United States; and (5) investments in the capital stock of, and rediscounting for, regional agricultural credit corporations to be established in any Federal land bank district and managed by officers and agents appointed by the Corporation for the purpose of making loans or advances to farmers and stockmen.[7]

7. Advances for relief were limited in the aggregate to $300,000,000, disbursable within a period of two years. Applying state governors were required to certify the necessity for such funds and the inadequacy of other relief resources, public and private. These advances were to be ". . . reimbursed to the Corporation . . . by making annual deductions, beginning with the fiscal year 1935, from regular apportionments made from future Federal authorizations in aid of the States and Territories for the construction of highways and rural post roads of an amount equal to one-fifth of the share" of any borrowing state or territory, or one-fifth of the amount advanced plus accrued interest, "whichever is the lesser," until paid, but if agreements were entered into for other forms of repayment and defaulted, then the same deductions should be made beginning in the next fiscal year following such default. Advances to political subdivisions were to be in the form of loans repayable without the right of deduction from prospective Federal funds.

Loans for "self-liquidating" projects were authorized to states, territories, political subdivisions, public corporations, boards and commissions, corporations providing cheaper housing or reconstructing slum areas and operating under state or municipal regulation, private corporations interested in bridges, tunnels, docks, viaducts, waterworks, canals, and markets, devoted to public use, and private, limited-dividend corporations interested in developing forests and other renewable natural resources under governmental regulation. Projects were "deemed to be self-liquidating" if they could "be made self-supporting and financially solvent" and if the construction cost thereof would be

For the protection of the public interest, two new requirements were imposed. First, loans were forbidden "to any financial institutions, any officer or director of which is a member of the board of directors of the . . . Corporation or has been such a member within the twelve months preceding the approval of the loan or advance." This was designed merely to criticize the former chairman, Charles G. Dawes, whose bank borrowed heavily shortly after his resignation.[8] It would not prevent similar loans in the future, because a needy borrower could easily accept a *pro forma* resignation of an obstructing officer or director. Second, monthly reports containing a report of activities and expenditures including the "names of borrowers . . . and the amount and rate of interest involved in each case" were to be submitted "to the President, and to the Senate and the House of Representatives (or the Secretary of the Senate and the Clerk of the House of Representatives, if these bodies are not in session)," which latter was construed by the Clerk of the House to impose upon him the duty to make such statements public.[9]

"returned within a reasonable period by means of tolls, fees, rents, or other charges . . . (other than by taxation) . . ." Certain of these loans could be made in the form of purchases of securities having maturities up to 10 years. Each contract or loan was to specify that no convict labor be directly employed, the 30-hour week be used so far as practicable, and ex-service men with dependents be given a preference in employment.

Loans to finance sales of agricultural surpluses in foreign markets were to be made only when "such sales cannot be financed in the normal course of commerce" and would not "affect adversely the world markets for such products." Loans were not to be made on sales of cotton owned by the Federal Farm Board or the Cotton Stabilization Corporation.

Subscriptions to the capital stock of regional agricultural credit corporations were to be $3,000,000 or more for each corporation and charged to the funds allocated to the Secretary of Agriculture. These regional units were authorized to: (1) make loans or advances to farmers and stockmen, the proceeds of which were to be used for an agricultural purpose (including crop production) or for the raising, breeding, fattening, or marketing of live stock; (2) charge rates approved by the Corporation; and (3) rediscount with the Corporation and Federal intermediate credit banks.

8. Dawes resigned June 6; the loans to his bank, the Central Republic Bank and Trust Company of Chicago, were made June 25 ($16,000,000) and June 26 ($74,000,000). The balance outstanding on these loans on January 6, 1933, totaled over $66,000,000.

9. For the legal arguments on this point, see the protesting opinion

Other amendments of lesser importance followed. On July 22, 1932, the Corporation was required to allocate to the Secretary of the Treasury $125,000,000 to purchase the stock of twelve newly-created Federal home loan banks.[1] On January 6, 1933, the House of Representatives requested the Corporation to publish detailed information regarding all loans made during the five months prior to July 1.[2] Consequently, the details were published in the newspapers of January 27 and 28.

V

To measure the results of a device designed to allay fears, assure liquidity, and free credit institutions for expansion, it is more important to know what credits were granted or "authorized" than what amount of cash advances were actually made. The mere assurance of a loan or a source of available funds upon demand is in many cases as effective in benefiting the applicant as real cash. The credits established during the first "year" totaled 2.3 billion dollars, but the advances made were only 1.6 billion dollars.[3] Of the credits established, banks (other than land or intermediate credit banks) were the chief recipients (42%); agricultural and railroad purposes shared second place (about 15% each). Building and home loan institutions (10%), self-liquidating projects

of the general counsel of the Corporation in the Commercial and Financial Chronicle, 135:2431–2433 (October 8, 1932) and the answering brief of counsel published by the clerk in the Commercial and Financial Chronicle, 135:2597–2598 (October 15, 1932). Details of loans made July 21–31 were published on August 22; those during August, on October 7.

1. C. 522, Sec. 6(f), 47 Stat. 728.

2. H. Res. 335. The question of publicity is discussed on pp. 16–17, infra.

Since the foregoing was written, the Corporation was empowered to purchase and sell preferred stock in national banks, its lending power being expanded correspondingly.— Act of March 9, 1933.

3. The Corporation opened for business on February 2, 1932. For convenience, the period of operation to December 31, 1932, may be treated as a "year," with a short "quarter" ending March 31, and three full quarters ending December 31. The quarterly data have been classified, rearranged, and summarized, so as to present the credits established, the advances made, the repayments relative to advances, and the loans outstanding, in Table III in Appendix.

(6%), and relief loans (5%) held subordinate places. Of the advances made, banks were also the chief beneficiaries (52%), with railroads (17%) and agricultural borrowers (9%) holding second and third places.[4]

A quarterly analysis of the credits established and advances made indicates that the peak of activity occurred in the second quarter ending June 30, 1932, that quarter providing 40% of the year's totals. Apparently a genuine attempt was then made to attack the situation with force. An inspection of the quarterly data for loans to banks and of the figures for bank suspensions reveals that the Corporation made its best fight to sustain the banking structure during this second quarter.[5] But the sustained foreign drain of gold, the accompanying collapse of domestic confidence, and the unwillingness of American bankers to borrow for relending,[6] dashed

4. These categories, it should be noted, are somewhat superficial, We know that of the loans to railroads, more than one-tenth were used to retire bank indebtedness, and more than one-half for interest and maturing funded debt, a large portion of which must have accrued to banks. Likewise, the loans made to insurance companies and mortgage loan companies should be divided in some unknown ratio between those aiding agriculture and city housing.

5. The peak of applications from banks (including receivers, but excluding land banks and building associations) came in April, the monthly figures being: February, 135; March, 1,009; April, 1,269; May, 1,135; June, 1,088; July, 1,049; August, 899; September, 515; October, 484; November, 462; December, 633.—See mimeographed releases of the R. F. C., October 4, 1932, p. 4, for February to August figures; January 23, 1933, p. 4, for September to December figures.

6. The New York Times of May 20, 1932, p. 1, stated: ". . . the President had been disturbed at the apparent lack of coöperation of the commercial banks of the country in the credit expansion drive.

". . . it is asserted, the banks have not passed the benefits of these relief measures on to their customers. . ." Consequently, committees of bankers and industrialists were appointed by Federal reserve districts to coöperate with the R. F. C. to widen the use of Federal reserve credit, beginning with a committee in New York announced May 19. No appreciable results are recorded as having been accomplished by these committees.

Later, on November 17, 1932, the Chairman of the Board of Directors of the Corporation, Atlee Pomerene, made some caustic remarks about the 10 per cent of the banks in the United States that were "75 per cent or more liquid," using the words: "Now, my hearer, and I measure my words, the bank that is 75 per cent liquid or more and refuses to make loans when proper security is offered, under present

all hopes for a prompt banking recovery among persons fully informed as to the actual conditions prevailing within banks.

Repayments relative to current advances mounted steadily, the percentages being 4, 10, 26, and 35, respectively, for the successive quarters. The turnover of loans to banks is even more striking, with percentages of 5, 17, 45, and 58 for the identical quarters, and gives color to the view that the Corporation acted as a government central bank, performing a necessary function and substituting for other banking institutions. Total repayments during the year were equal to about one-fifth of the aggregate of all kinds of loans made during the year, a record which, in the face of increasing economic and financial distress, is remarkable.

The classification of loans outstanding at the end of the year 1932 shows that the Corporation continued to be more largely a banker's loan bank than anything else. Banks (other than land banks) and trust companies were owing 45 per cent of the total, and railroads, 21 per cent. Agriculture and relief loans followed with 10 per cent and 6 per cent, respectively, but loans outstanding for the financing of "self-liquidating projects" and for the capital stock of home loan banks were ludicrously insignificant portions of the total.

Percentage calculations alone do not provide a satisfactory basis for appraisal of results. Consideration must be given to the important features of each of the major loan groups — banks, railroads, agriculture, self-liquidating projects, and relief.

(1) Banking loans, the most important group, were made in all sections of the United States, credits totaling $950,000,000 being authorized for about one in four of the open banks, and about one in ten of the banks in liquidation that had closed during the last three years.[7] Of the $200,000,000 pro-

circumstances, is a parasite in the community and deserves the condemnation of every thinking man and woman."— Mimeographed release of address made at Boston, Massachusetts, p. 6.

7. Much was said about the large number of loans made to small banks located in places of small population. But such statements and statistics were largely meaningless, like the statements usually made as to bank suspensions, except as an index of the volume of clerical and

vided in the act for loans to receivers of closed banks, only $56,000,000, net, had been voted by the end of the year. In view of the potential benefit to be derived generally from releasing the reasonably liquid portion of deposits locked up in closed banks, it is difficult to understand why more complete and more prompt use was not made of the power to facilitate mergers and reopenings.

The publicity required for the details of all loans made to banks has been both praised and criticized. Doubtless, it is desirable in the long run to establish the precedent that public officials shall be required at any time to have their acts opened for public inspection. An emergency might make a deferment of such reports advisable, and such was the probable intention of the original act, since it made no provision for detailed publicity. When, however, it became evident that the Corporation did not intend to keep all banks open, and when the claim was frequently made that the bank suspensions were due solely to the bad management of small banks, much resentment developed. The resultant requirement of full publicity established the fact that financial weaknesses were not limited to small banks. Much of the contemporary argument that the absence of branch banking was the root of the trouble was weakened by the revelation that large branch systems had received liberal aid.[8] Beyond doubt, the con-

administrative work and of the general nature of the banking difficulties. No adjustment was made for the fact that small banks and small towns predominate in the United States, and no endeavor was made to obtain information as to the ultimate destination of funds loaned banks, in order to ascertain what proportion was used to take up prior loans owing to larger banks and cities. Cf. "A gradual reduction in the large volume of loans and other credit arrangements made by New York banks and institutions in other large financial centers to interior banking institutions is expected with the organization of the Reconstruction Finance Corporation and the passage of the Glass-Steagall banking bill."— New York Journal of Commerce, February 16, 1932, p. 1.

Equally unfair was the criticism that the Corporation had actually loaned to two banks more than $180,000,000 of its $430,000,000 outstanding at the end of the second quarter. Support to banks should be expected in proportion to the size of the liabilities.

8. "Six separate loans for a total of $64,900,000 were approved by the corporation prior to July 21 to the Bank of America National Trust and Savings Association of San Francisco . . . The Bank of Italy Mort-

tinuation of suspensions among banks of all types, long after the Corporation had ample opportunity to aid, was depressing. Probably the detailed monthly reports after July, 1932, did direct the public's attention to some of the weaker spots, but it is rather far fetched to assume that complete deferment of publicity would have restored insolvent banks to solvency. The banking situation in general was too desperate to stand or fall upon the mere issue of publicity. There had been too much concealment too long.

(2) Credits were established for 62 railroads totaling over $337,000,000, of which 8 railroads in receivership were allowed $18,000,000. Of the amounts authorized for various stated objects of the railroads, nearly 50 per cent were to be used for meeting maturing loans, equipment trusts, and funded debt, over 20 per cent to pay interest on funded debt, and nearly 20 per cent for new construction and repairs to equipment.[9]

In the making of railroad loans, the controversy over "bailing out big banks" again arose. Early in March a difference of opinion developed between the Interstate Commerce Commission and the Corporation as to whether advances should be made to railroads for the purpose of repaying in full short-term bank loans. To heal the breach, President Hoover held a conference attended by 15 railroad executives and by some members of the Board of Directors of the Corporation and of

gage Company was credited with a $30,000,000 loan . . ." The balance remaining outstanding on these two accounts on January 6 totaled less than $29,000,000.— New York Times, January 27, 1933, p. 2.

In a statement made January 26, 1933, Chairman Giannini revealed that on February 15, 1932, $50,000,000 was owed to "the National Credit Corporation, National Credit Association, and New York banks," that these loans less some repayments were transferred to the R. F. C., and that the maximum amount ever owed the R. F. C. by the Bank of America and all its affiliates was less than $53,000,000.— Commercial and Financial Chronicle, 136:611 (January 28, 1933).

9. Of new construction alone, the larger items were $27,500,000 for Pennsylvania Railroad electrification, $10,400,000 for completion of the Cincinnati Union Terminal, $4,400,000 for New York Central improvements on the west side of New York, and lesser sums for the Denver and Rio Grande Western's Dotsero Cutoff and for grade separations in Milwaukee. Thirteen large railroad systems received over $264,000,000 in credits of $10,000,000 or over for each.

the Interstate Commerce Commission. As a result, the Corporation adopted a resolution on March 18 authorizing a loan to the Missouri Pacific Railroad of $5,850,000 to be used to pay one-half of certain maturing bank loans due April 1, the bankers to extend the remainder for six months.[1] On March 23 the Interstate Commerce Commission yielded to this procedure "with some reluctance" and bitterness.[2] Later, Interstate Commerce Commissioner Joseph B. Eastman stated before a Senate banking and currency sub-committee that the Interstate Commerce Commission "assumed, in appraising the adequacy of security, that Congress intended that the government should take somewhat more risk than would be taken under present conditions by private bankers. Otherwise no loans would be made."[3] The Interstate Commerce Commission, it may be added, used its power of approval or disapproval to occupy new ground, such as determining salaries for railroad officials[4] and forcing capital structure reorganizations.[5]

(3) Loans in aid of agriculture were made in many forms and through numerous agencies. Consolidating all forms of

1. Commercial and Financial Chronicle, 134:2272 (March 26, 1932).

2. The Interstate Commerce Commission said: "We are taking the action here with some reluctance. We are not convinced that the Reconstruction Finance Corporation should be expected to take up bank loans of this character. We yield our own views to those of that body which, as we construe the law, is charged by Congress with the responsibility for determining that question. . .

"The bankers who hold the loans are bankers for the carrier. As such, they have profited largely in handling its financing in the past. It is often represented to us that the relation of a banker to a railroad is very valuable to it because of the banking assistance so rendered available in time of stress; that a railroad can afford to compensate its bankers well in connection with its regular financing in order to have such support available when it is needed.

"We have heretofore thought that theory to have more merit than this transaction appears to indicate."— Report of Interstate Commerce Commission, quoted in Commercial and Financial Chronicle, 134:2456–2457 (April 2, 1932).

3. New York Times, February 2, 1933, p. 25.

4. The first of such was the Stockton Terminal and Eastern Railroad — Commercial and Financial Chronicle, 135:908 (August 6, 1932).

5. The first of such was the St. Louis-San Francisco Railway. — Ibid., 134:3386–3387 (May 7, 1932).

agricultural credits established and advances made, we find totals respectively of $313,000,000 and $149,000,000. Less than half of the agricultural credits were drawn out within the year, whereas both bank and railroad credits were nine-tenths used.

The Secretary of Agriculture was allocated $131,000,000, drew in cash $75,000,000, and repaid $15,000,000, during the year. From these funds, he had loaned by the end of May $64,000,000 to 507,632 farmers.[6] By November 30, when the notes fell due, repayments approximated 23 per cent of the loans, and on December 31, about 26 per cent.

While some further aid was extended to agriculture through credits and loans to the Federal land banks, joint stock land banks, Federal intermediate land banks, live stock credit corporations, and agricultural credit corporations, the most comprehensive move of a semi-permanent character was the establishment by the Corporation late in the year of regional agricultural credit corporations in Federal land bank districts,[7] financed by capital stock purchases and rediscounts and therefore able to assume considerable responsibility both for live stock and grain farmers. These regional institutions began to loan on October 8 and had $42,000,000 of paid-in capital and over $7,000,000 of authorized rediscounts by the end of the year. It remains to be determined why the Federal intermediate credit banks did not or could not meet the needs of the situation without these new and expensive organizations. For the carrying and orderly marketing of agricultural products, few actual advances were made ($1,400,000), altho credits of $55,000,000 were voted.[8]

(4) It proved exceedingly difficult to put funds to work

6. The loans averaged $126.48 and were made to farmers in every state except Rhode Island. Borrowers were required to sign notes "payable to the Secretary of Agriculture, on or before November 30, 1932. . ." and "to agree to use seed and methods approved by the Department of Agriculture through its local representatives . . ." and "to plant a garden for home use and a sufficient acreage of feed crops to supply feed for their live stock."— Ibid., 134:1315 (February 20, 1932).

7. By November 17, 1932, offices had been opened in 31 cities.

8. Practically all for cotton (American Cotton Coöperative Association, $35,000,000; Cotton Stabilization Corporation, $15,000,000).

for "self-liquidating projects" of new construction, only $16,000,000 being advanced, and of that amount more than $15,000,000 in the month of December alone, altho authorizations totaling over $130,000,000 had been voted between September 13 and the end of October.[9] The American Engineering Council announced early in November that prospective projects then totaled nearly $1,000,000,000[1] and that 37 engineers had been appointed as members of the advisory committees of the Corporation's loan agencies to study and pass upon plans, their work being coördinated by the Engineers' Advisory Board of the Corporation at Washington. Considerable difficulty was encountered, however, because of inadequate engineering data submitted with applications and lack of general response upon the part of local communities.

(5) Advances for relief and relief work could be made shortly after the July amendment. The first cash advances were made in August, the amounts rose steadily in each succeeding month, and the total in December alone was nearly $29,000,000, setting a pace sufficiently rapid to exhaust the remainder of the allowance in eight additional months. The demand was very general, 36 states and two territories participating.[2]

9. To December 31, 1932, the Corporation had authorized 50 projects aggregating nearly $147,000,000.

1. The council reported that 64 projects submitted in complete form had been approved for $136,000,000, that 42 projects in incomplete form aggregating $189,000,000 were pending, and that 87 additional projects had been submitted with little or no data, requesting $386,000,000. A classification of 192 projects of the foregoing 193, and calling for $700,000,000, showed a great preponderance in number of water supply systems (85), with secondary emphasis on bridges (28), irrigation systems (21), and power plants (14). In value, 1 ship canal accounted for nearly one-fourth of the total; bridges, one-fifth; 3 tunnels, one-sixth; and 12 housing projects, about one-eighth. Of the 64 projects approved, 30 were for water supply systems and 11 for bridges, but of the total amount of $136,000,000 for these projects, over one-fourth was to be used for 3 sewer projects, one-fourth for bridges, and nearly one-fourth for 5 irrigation schemes, the remainder being scattered among 5 power plants, 3 housing plans, an airport, water systems, markets, 2 docks, 2 terminals, and 1 ferry.— Ibid., 135:3268 (November 12, 1932).

2. As of December 23, the largest authorizations to states were (in millions of dollars): Illinois, 25; Pennsylvania, 13; Wisconsin, 8; Ohio and Louisiana, each 5; Michigan, 4; and, additionally, to municipalities

The rates of interest charged varied widely. Upon relief and relief work loans, the rate was fixed by statute at 3 per cent. Upon other loans, the rates were made discretionary with the Corporation, and different rates were established for different types of loans. The general level of these discretionary rates was that of a period of active business. Relative to the extraordinarily low contemporary rates upon short-time loans of unquestioned security, the discretionary rates fixed in 1932 were penalty rates. This was recognized by a general cut effective January 1, 1933.[3] As established, the rates produced an income more than sufficient to meet the current expenses and interest payments of the Corporation in 1932. No reserves, it should be said, were set up for contingent losses on loans, or for dividends on the capital stock. An important contributing factor to the success in meeting current outgo was the low rate of 3½ per cent paid upon the debentures issued.[4]

and counties in Ohio, 3; Michigan, 2.— Mimeographed release of the R. F. C., December 30, 1932, pp. 6–7.

3. For the rates charged, see Table IV in Appendix.

4. The condition of the R. F. C. on December 31, 1932, is best shown by simplifying its balance sheet, as follows (millions of dollars):

Assets		*Liabilities*	
Loans	1,224.7	Capital stock	500.0
Funds set over to the Secretary of Agriculture for management	60.0	Surplus	17.8
		3½ per cent notes	810.0
Funds set over to the Secretary of the Treasury for home loan bank stock	.8	Deposits due regional agricultural credit corporations	16.0
Stock of regional agricultural credit corporations	42.0	Miscellaneous	.7
Accrued interest receivable (net)	8.8		
Cash (net)	7.8		
Miscellaneous	.4		
Total	1,344.5	Total	1,344.5

See Quarterly Report of R. F. C., quarter ended December 31, 1932, pp. 20–21.

VI

Upon the foregoing record of powers and performance, how shall we appraise the results? Certain it is that much depended upon the quality and vigor of the management. The Corporation had great potentialities if administered with economic insight. A survey of the law and the operations suggests that during the first half year the powers were limited but the administration forceful, and that during the last half year neither vigor nor economic insight was exercised on the scale called for by the expansion of resources and powers granted by the July amendment. A student of the history of business cycles would pronounce the Corporation a mere palliative, not a cure for depression; and therein a failure. True, some results were obtained, but they are to be found in the realms of psychology, morals, and public organization. Perhaps it is too much to expect that the Corporation should have effected a cure for the crisis and depression. But the label "Reconstruction" offered more than hope and mere salvage.

As regards economic fundamentals, it is noteworthy that at the outset there was an unwillingness to face the facts and to grapple with them. No attention was paid to the basic causes of the crash of markets, trade, and production. No effort was made to provide evidence as to the realized or prospective relations of demand, supply, inventories for different geographical areas, products, industries, and stages within each industry. It was assumed that the general application of a financial remedy alone was required. Even so, no careful calculation was made of the sums that would be needed, nor of the rapidity with which they would need to be applied, nor of the period of time required to achieve the desired results. Either the Corporation was too puny for its problem or its administration too pusillanimous.

Among economic results, first to be considered is that of aid to banks — the earliest and the most discussed. *There was no comprehensive plan for rebuilding the shattered banking framework.* Nothing was expressed beyond an intention to support the existing institutions, in order to restore confidence and

diminish hoarding. To attain this objective even a tyro knew that not one bank failure should be allowed to occur after the Corporation went into action, and that the closed banks should be reopened quickly with the largest possible restoration of deposits. The psychological effect of bank closings can be reflected statistically only by the use of cumulative data. But as late as November, 1932, the Chairman of the Board of the Corporation was talking of the reduced *rate* of bank closings.[5]

The great potentialities under the amendment of the Act in July, for stimulus to business recovery by the financing of new construction, were not realized at all. Presidential dictation, by refusing to permit the use of substantial additional Federal funds for a simultaneous public works program, determined that the full burden of providing a new stimulus should be thrown upon the Corporation. But the Corporation was seriously limited by: (1) being forbidden to finance any private project without a public purpose, or any public project, unless "self-liquidating" in character; and (2) receiving added lending power of no more than $1,500,000,000 for new construction when it was known that the actual shrinkage in construction contracts, public and private, in the United States had been $3,500,000,000 in 1931 as compared with 1928.

Whatever power the Corporation possessed to stimulate business, by financing new construction or otherwise, was negated by lethargy. At the end of the first five months, only 40 per cent of the Corporation's total lending power was in use, and at the end of 11 months less than 36 per cent.[6] Some allowance must be made, no doubt, for the difficulties inherent in organizing an entirely new staff and a proper routine for

5. "In the six months preceding the . . . Corporation, there were . . . a total of 1,860, or an average of 310 banks per month.

"In the six months following the establishment of the Corporation, the failures declined . . . a total of 610 or an average of 101 and ⅗ banks per month . . ."— R. F. C. mimeographed release of address delivered in Boston, November 17, 1932, p. 5.

6. The Corporation, on this showing, could ill afford to criticize the banks for failure to lend. Cf. p. 14, footnote 6, supra.

such a great variety of loans, under all the handicaps of statutory bureaucracy and the requirement of "adequate security."

The need for speed in action was greatest in the case of bank loans. A race had to be run between the creation of new bank deposits in exchange for new issues of government bonds, these deposits being disbursed by the Corporation,[7] and the shrinkage of "old" bank deposits by their use to retire private loans at banks and by closings. To provide a credit stimulus for business, it was necessary that the new deposits should rapidly and continuously outrun the shrinkage of the old. The race was lost because the retirement of old deposits was larger than the creation of new deposits by a ratio of 5 to 1 in the first nine months of 1932. *Failure to observe this index was fatal.*

To criticize the Corporation for not keeping banks open or stimulating business recovery assumes a large objective — the maximum achievement. Possibly the legislators *thought* only of a minimum objective — that business revival would occur soon and that the Corporation would serve as a bridge for the better concerns. Yet, even for such a limited objective, it must be said, on the basis of the experiences of 1932, that it was a gamble that failed.

By making loans which enabled the railroads to maintain their fixed charges, the operations of the Corporation contributed heavily to prevent the usual revival. In the course of business cycles, there has been no revival after a great shock without a substantial reduction in the fixed charges of business units. While such a reduction alone may not restore business profits sufficiently to bring about revival, the downward adjustment of overhead costs does add to the profit possibilities of any adventitious stimulus that may follow, and releases funds for new purchases of plant and equipment.

7. The Corporation was peculiarly fitted to stimulate business by the use of public credit without disturbing confidence through an unbalanced Federal budget. The Corporation's notes bought by the Treasury were treated as an investment and not as an expenditure outlays for Federal public works were treated as current expenditures.

Skimping maintenance to meet fixed charges does not provide the necessary stimulus to buying.

Further, the Corporation loans to the railroads tended in effect to increase fixed charges by shifting unearned charges of the present to the future, with compound interest added. The prospective burdens of non-borrowing concerns, which might pull through without reorganization, also were likely to be increased over the next decade because of higher taxes, necessary to write off the losses and unrecouped costs of operation of the Corporation. The expressed desire of the Interstate Commerce Commission to use its power to force many railroads to reorganize promptly, was denied. The Corporation by its loans obstructed reorganization and had no program for facilitating expeditiously and economically the inevitable adjustments. To seek revival solely by surcharging fixed costs was naïve.

A general appraisal upon the basis of a single year of operation must be tentative. As a device for stopping the depression, the Corporation has been a failure. As a device for checking and modifying the course of the depression, it has had some effect, but not as much as could have been achieved by a bolder and more discriminating management. In the distant future, the economic historian may be able to determine, in proper perspective, the significance, if any, of the Corporation as a force in our economic and political evolution.

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APPENDIX

TABLE I. GROWTH AND DECLINE OF BANKS AND BANK CREDIT[1]

	1 Number National Banks[2] (*thousands*)	2 Number Other Banks[2] (*thousands*)	3 Number All Banks[3] (*thousands*)	4 Number Banking Offices[4] (*thousands*)	5 Individual Deposits in All Banks[5] (*in millions of dollars*)	6 Individual Deposits Subject to Check in All Banks[7]
1899	3.6	6.1	9.7	9.8	6.8	.....
1900	3.7	6.7	10.4	10.4	7.2	.....
1913	7.5	18.6	26.0	26.5	17.5	8.2
1914	7.5	19.2	26.8	27.3	18.6	9.5
1918	7.7	21.2	28.9	29.6	28.8	12.1
1921	8.2	22.7	30.8	32.0	35.7	16.1
1922	8.2	22.1	30.4	32.0	37.6	14.3
1929	7.5	17.8	25.3	28.6	53.9	21.4
1930	7.3	16.8	24.1	27.5	55.0	21.1
1931	6.8	15.3	22.1	25.5	51.8	18.7
1932	6.1	12.9	19.0	.....	42.0	14.3

[1] Data for dates nearest June 30 in each year. No attempt has been made to adjust these published figures; broad changes are satisfactorily reflected.

[2] From Annual Report of the Comptroller of the Currency, 1931, p. 1022, for years prior to 1932; from Federal Reserve Bulletin, February, 1933, p. 74, for 1932.

[3] Computed from columns 3 and 1.

[4] From Annual Report of the Comptroller of the Currency, 1931, pp. 1024–1025, for years prior to 1932; from Federal Reserve Bulletin, February, 1933, p. 74, for 1932.

[5] Computed by adding to column 3, branch banking data. From Federal Reserve Bulletin, December, 1924, p. 935, for years prior to 1929, classifying branches then operating according to the date of establishment; from Federal Reserve Bulletin, February, 1932, p. 104, for years 1929 to 1931.

[6] From Annual Report of the Comptroller of the Currency, 1915, vol. I, p. 124, for years 1899 to 1913, from Annual Report of the Federal Reserve Board, 1931, p. 88, for years 1914 to 1931, and from Federal Reserve Bulletin, February, 1933, p. 74, for 1932, using figures for "deposits exclusive of interbank deposits."

[7] From Finance Reports, 1913, p. 455; 1914, p. 547; 1918, p. 838; 1921, p. 941; 1922, p. 837; 1929, p. 788; 1930, p. 920; 1931, p. 849; 1932, New York Times, December 18, 1932, p. XX 3. No data for 1899 and 1900.

TABLE II. BANK SUSPENSIONS AND HOARDING

Bank Suspensions, All Banks, by Months

	Number[1]				Deposits[1] (*in millions of dollars*)				Average Deposits per Closed Bank[2] (*in tens of thousands of dollars*)				Money in Circulation[3] Monthly Averages of Daily Figures Seasonally Adjusted (*in billions of dollars*)		
	1929	1930	1931	1932	1929	1930	1931	1932	1929	1930	1931	1932	1930	1931	1932
January	54	99	202	342	16	29	77	219	30	29	38	64	4.7	4.7	5.7
February	60	85	77	121	22	33	35	57	36	39	45	47	4.6	4.7	5.7
March	51	76	86	48	9	24	34	15	18	31	40	32	4.6	4.6	5.6
April	29	96	64	74	8	33	42	32	27	35	65	43	4.6	4.7	5.5
May	112	55	91	82	24	19	43	34	22	35	48	42	4.6	4.7	5.5
June	48	66	167	151	19	71	190	133	40	107	114	88	4.6	4.8	5.6
July	69	65	93	132	66	32	41	49	96	50	44	37	4.5	4.9	5.8
August	17	67	158	85	9	22	180	30	50	33	114	36	4.5	5.0	5.8
September	39	66	305	67	10	24	234	14	26	36	77	20	4.5	5.1	5.7
October	43	72	522	103	13	25	471	20	31	34	90	20	4.4	5.4	5.6
November	68	254	175	95	23	186	68	44	33	73	39	46	4.4	5.4	5.6
December	52	344	358	153*p*	16	367	277	83*p*	30	107	77	54*p*	4.6	5.4	5.5
Total	642	1,345	2,298	1,453*p*	235	865	1,692	730*p*	37	64	74	50*p*			

[1] From Federal Reserve Bulletin, February, 1932, p. 106, for 1929 to 1931; ibid., February, 1933, p. 77, for 1932.

[2] Computed.

[3] From Federal Reserve Bulletin, December, 1932, p. 743, except figure for December, 1932, computed from Money in Circulation data reported in Bulletin of January, 1933, p. 11, after correction by use of Adjustment Factors for Money in Circulation data, ibid., December, 1932, p. 742. "'Money in circulation,' as officially defined, comprises all United States money issued and outstanding outside the Treasury and the Federal reserve banks, except United States coin known to have been exported to foreign countries. It includes, therefore, not only money in active use in hand-to-hand transactions and money held by individuals and business houses for ordinary use, but in addition money in the vaults of banks, money in hoards, United States paper currency held abroad, money lost or destroyed, etc." Ibid., p. 735.

"Constant measures of seasonal movement, unvarying in amount regardless of the total volume of money in circulation, were used in preference to seasonal indexes, notwithstanding certain obvious shortcomings of this procedure, because . . . at a time like the present, when there is a large inactive element in the money outside the reserve banks and the Treasury, the use of a seasonal adjustment on the more common basis of relatives would give erroneous results." Ibid., p. 741.

p Preliminary.

TABLE III. RECONSTRUCTION FINANCE CORPORATION OPERATIONS

February 2 to December 31, 1932[1]

	Credits Established (including Underwritings) (*in millions of dollars*)	Advances Made	Repayments Relative to Advances[2] (*per cent*)	Loans Outstanding and Investments December 31, 1932 (*in millions of dollars*)
Under R. F. C. Act (Sec. 5);				
Authorizations to:				
Closed Banks (including trust companies)	56.1	850.9	30	594.6
Other Banks (including trust companies)	898.2[3]			
Building and Loan Associations	99.8	93.9	10	84.2
Insurance Companies	83.0	68.0	8	62.4
Mortgage Loan Companies	94.8[3]	88.3	13	77.0
Credit Unions	.5	.4	2	.4
Federal Land Banks	29.0	18.5	0	18.5
Joint Stock Land Banks	6.3	2.5	2	2.5
Agricultural Credit Corporations	3.6	3.5	31	2.4
Regional Agricultural Credit Corporations	7.3	5.4	—[4]	5.4
Live Stock Credit Corporations	13.1	11.8	34	7.7
Railroad Receivers	18.0	284.3	4	272.5
Other Railroads	319.4			
Totals, under original act, as published in tables	1,629.2[3]	1,427.6	21	1,127.7
Underwritings to:				
Federal Intermediate Credit Banks, sales of debentures	68.0	0.0	—	—
Under R. F. C. Act (Sec. 2);				
Allocated to the Secretary of Agriculture	131.0	64.2[5]	26	47.5[5]
Totals, under original act, as computed from tables and text	1,828.2	1,491.8	21	1,175.2

Under Federal Home Loan Bank Act Amendment to Sec. 2 of R. F. C. Act;				
Allocated to the Secretary of the Treasury	125.0[6]	.8[7]	0	.8
Under Emergency Relief and Construction Act of 1932;				
For "Relief and Work Relief" to States, Etc. (Sec. 1, Title I)	112.6	80.0	0	80.0
For "Self-liquidating Projects" by Loans or Contracts (Sec. 201-a, Title II)	146.6	15.7	0	15.7
For "Carrying and Orderly Marketing of Agricultural Commodities and Live Stock . . ." (Sec. 201-d, Title II)	54.8	1.4	8	1.3
For the Capital Stock of "Regional Agricultural Credit Corporations" (Sec. 201-e, Title II)	0.0[8]	42.0[8]	0	42.0
Totals, under additions to original act, as published	439.0	139.9	—[4]	139.8
Grand Totals, as computed	2,267.2	1,631.7	19	1,315.0

[1] Data from "Quarterly Report of R. F. C.," quarter ended December 31, 1932, pp. 1–3, 6, 7, 17. All figures have been rounded to nearest decimal place; hence, totals will not check.

[2] Computed from advances and repayments, as published.

[3] Not as published in quarterly report of December 31, 1932; the additions, consisting of credits rescinded subsequent to the quarters in which granted, make the total shown for the year equal the sum of the quarters as separately published.

[4] Less than ½ of 1 per cent.

[5] Based upon advances made and repayments received by the Secretary of Agriculture, reported in R. F. C. mimeographed release of January 23, 1933, pp. 1–2.

[6] The amendment allocated a specific amount for the purchase of the capital stock of twelve home loan banks.

[7] No data published for advances made by the Secretary of the Treasury hereunder.

[8] Funds utilized under Sec. 201-e are a charge against the percentage allotment made to the Secretary of Agriculture under Sec. 2 of the original act, but are shown separately here. Figures are not available for the actual advances made by the regional agricultural credit corporations, as of December 31, 1932; as of December 23 they had approved applications totaling 42 million dollars, and had advanced 20 million dollars. See mimeographed release of the R. F. C., December 30, 1932, p. 9.

TABLE IV. INTEREST RATES CHARGED

For, or to:	In 1932	On and After January 1, 1933
Relief and work relief	3%[1]	3%[1]
Federal land banks	4½	4
Receivers of closed banks	5	4½
Railroads, to create employment	5	4½
Self-liquidating projects	5@ 6.97[2]	—[2]
Open banks, trust companies, building and loan associations, insurance companies, mortgage loan companies, credit unions, joint stock land banks, agricultural credit corporations, live stock credit corporations	5½	5
Loans by the Secretary of Agriculture for crop production	5½	—
Rediscounts for regional agricultural credit corporations	—[3]	5
Railroads, for other purposes than creating employment	6	5½
Carrying and orderly marketing of agricultural commodities and live stock	6[4]	5
Financing sales of agricultural surpluses in foreign markets	—	5
Loans by regional agricultural credit corporations to farmers and stockmen	7	6½[5]

[1] Fixed by statute; all other rates were discretionary.

[2] Contractual and varying. The range here shown is for December. Announcement was made on December 24, 1932, that complete refinancing at a lower rate within two years from date of loan would reduce rates retroactively, but not below 4 per cent.

[3] Not reported; presumably 5½ per cent as to agricultural credit corporations.

[4] As of October 31; was reported as 5½ per cent on November 30.

[5] 6½ per cent on outstanding loans; 5½ per cent plus inspection fee of not over 1 per cent on new loans.

See mimeographed releases of the R. F. C., November 16, 1932, p. 6, and December 30, 1932, pp. 5, 8, 9, and 10; Commercial and Financial Chronicle, 134: 1314–1315 (February 20, 1932); New York Times, January 27, 1933, p. 32, and January 28, p. 30.

THE USE OF INDIFFERENCE CURVES IN THE ANALYSIS OF FOREIGN TRADE

The recent developments in analysis of international trade have made it difficult to handle all the various theoretical cases by the traditional means of numerical examples. The following graphic application of indifference curves may provide a comparatively simple and handy tool of representation and analysis for the problem involved.

The theoretical tools applied are those of Marshall, Edgeworth, Pareto, but they are used in such a way as to enable

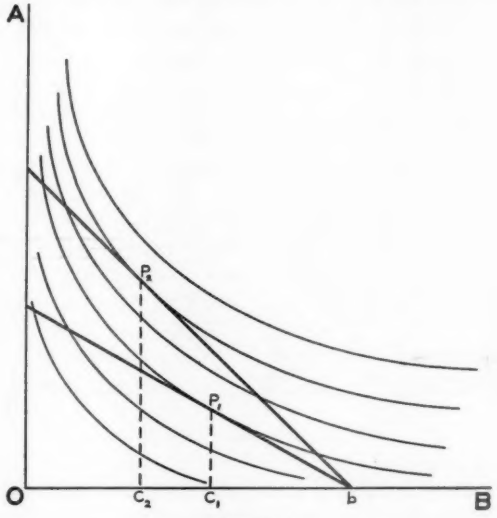

FIGURE 1

us to disclose the intimate connection between the "national" and the "international" elements of economic equilibrium.

Fig. 1 illustrates the elementary case in which the possessor of the quantity b of commodity B is exchanging a part of it

against another commodity, A, the terms of exchange being given. Representing the given rate of exchange (the "terms of trade") of B against A by the slope of the straight line bP_1, we find that the possessor of B will attain an equilibrium position by exchanging a quantity (bC_1) of B for P_1C_1 of A and retaining OC_1 of B; P_1 being the point where the exchange

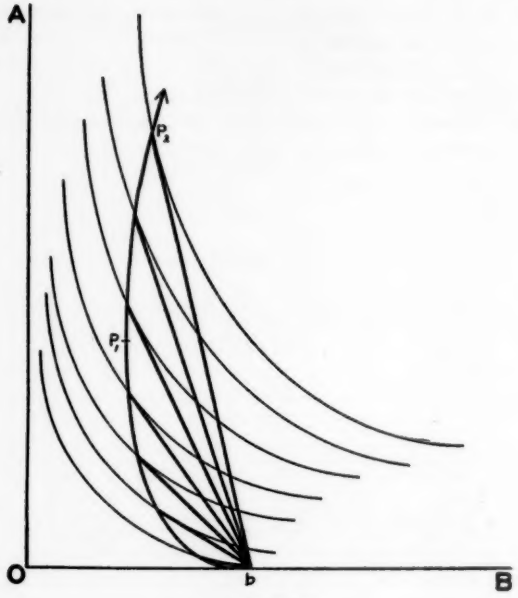

FIGURE 2

line is touching the "highest" indifference curve and consequently secures him the maximum utility. If there is movement away from this point (P_1) in either direction, by stopping the exchange nearer to b, or by pushing it further along the exchange line in the opposite direction the total utility of both commodities in his possession would be reduced. Another — more favorable — exchange line bP_2 will bring

about a different equilibrium point, P_2. This new position is marked by a larger quantity of both commodities exchanged and by a "higher" indifference curve; hence a greater total utility is attained.

The response of the quantities to a given change in the terms of trade depends entirely upon the shape of the indifference curves. Fig. 2 shows how the equilibrium point of a country shifts when the exchange line changes its slope.[1] The curve bP_1P_2 indicates that from b to P_1 the demand is elastic; an improvement in the terms of trade between the two limits raises both the exports and the imports. After this point is passed the demand becomes inelastic; any further betterment of the terms of trade is still accompanied by increasing import but leads to a reduction of export.

Evidently, under the assumption of constant opportunity costs, the same diagram can illustrate the distribution of a given amount of productive forces of a country between two alternative branches of industry. The opportunity costs of B in terms of A and vice versa, will remain constant when each of the two commodities concerned is produced at constant cost.[2] In this case, Ob (Fig. 1) represents the possible total output of B if this good only were produced. The slope of the line bP_1 indicates the possible results of diversion of productive forces into the other industry. In complete analogy with the previous case, the equilibrium will be attained in P_1 or P_2 respectively.

If both industries are subject to decreasing returns, the production curve will be concave toward the axes as indicated in Fig. 3.

Given the choice between diverting the production into the B industry along a given (straight) production line and providing the same commodity by trade moving along a given path of exchange (bP_2), the preference will be given to the

1. This diagram leads directly to the demand-supply curves of Marshall and Edgeworth.

2. For the sake of theoretical completeness, the exceptional case may be mentioned in which a combination of increasing cost in one branch of production and decreasing costs in the other may result in a constant opportunity cost relation between the two commodities.

line of the steeper slope, which in any case will lead to a "higher" indifference curve. However, in most cases the production path will be of a curved type as represented in Fig. 4. In this case some of the B-stuff will be produced and some will be acquired in exchange for A-stuff. The maximum utility will be attained by moving along the production curve

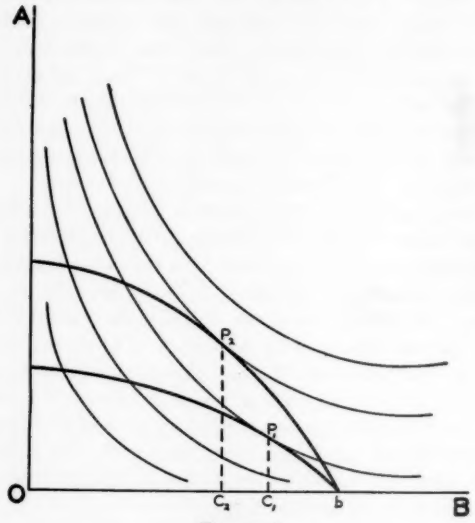

FIGURE 3

to the point K, and then proceeding along the exchange line to P_1. Analytically defined, K is the point at which a line with a given "exchange" slope $\left(\frac{P_1R}{RK}\right)$ will touch as a *tangent* the fixed production curve.

In the equilibrium position, Kg $(=RC)$ of the total quantity CP_1 of A is produced at home and P_1R is imported from abroad. The total production of B amounts to Og; Og of which is retained at home and Cb sent abroad. Evidently a change in the terms of trade will alter the whole

situation, shifting the point K either to the right or to the left. At K_1 (which corresponds to P_1 in Fig. 3) the country will evidently discontinue its foreign trade and reach a state of self-sufficiency. But should the slope of the exchange line, P_1K, decrease even more and move the point of tangency to the left of K_1, an "inverse" trade will start. It will become

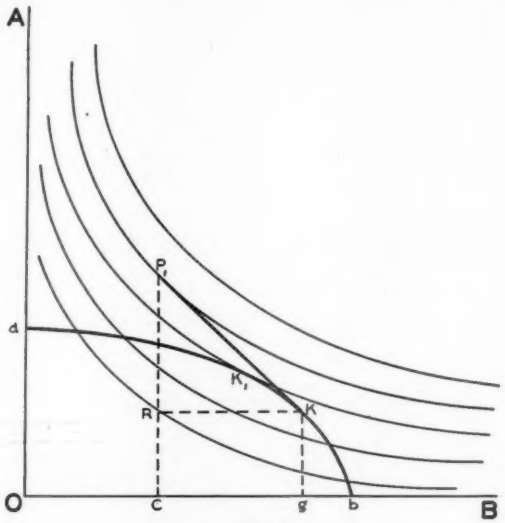

FIGURE 4

profitable to export A and to import B. Fig. 5 represents this situation. In complete analogy to Fig. 4, the quantity nq of B will be produced, an additional quantity, fP_2, of the same commodity will be exchanged "along" the qP_2 line for a quantity, nm of A. The distance, mO, will represent the amount of A which is retained in the country after the new equilibrium is reached.

Fig. 6 combines Figs. 4 and 5 in one system of coördinates, and gives a complete picture of balanced trade relations between two countries. So long as the analysis referred to

only one country, the "terms of trade" represented by the slope of the exchange lines were considered as given. Now only the indifference curves and the cost curves of the two countries are considered as "data." In Fig. 6 both countries have the same system of indifference lines; but the following analysis could be equally well applied if two dif-

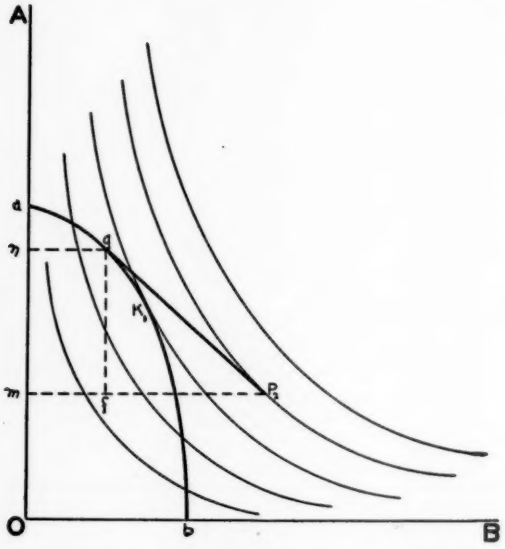

FIGURE 5

ferent systems of indifference lines were charted. The terms of trade and the quantities produced and exchanged can be deduced. The two conditions of equilibrium are: (1) both countries are dealing on the same terms of trade, i.e. the exchange lines are parallel, and their slopes are equal; and (2) the imported and exported quantities of each commodity are equal,

$$qf = P_1R \text{ and } fP_2 = RK.$$

The same condition can be expressed more simply by

$$qP_2 = P_1K,$$

i.e. both countries have to proceed equal distances along their respective paths of exchange.

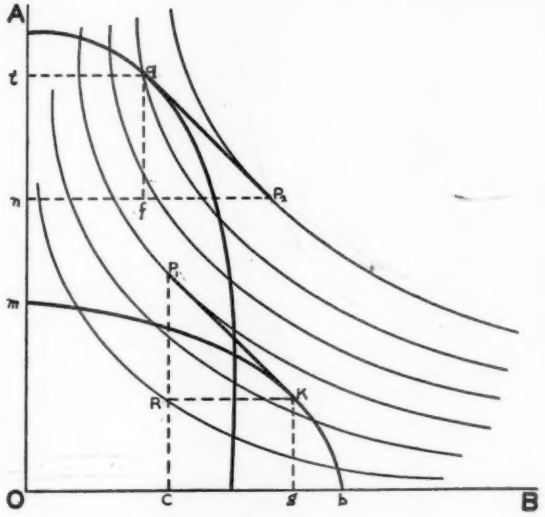

FIGURE 6

Without trying to make a point against the spirit of the theory of comparative costs, it may be interesting to observe that two countries with costs of production which are equal not only comparatively, but even absolutely, will start an exchange of their products if their systems of indifference lines, i.e. their relative demands are different. In Fig. 7 the case is represented graphically. The curve *ab* is the common opportunity cost line of the two countries. The two sets of indifference lines represent the different utility systems of the two countries. The indifference lines with the steeper slopes apply to country *A*, those with the lesser slopes apply to

country B. In a state of self-sufficiency, country A would reach its equilibrium point in P_1, producing and consuming the quantity P_1C_1 of A-stuff and P_1D_1 of B-stuff. The other country has its point of self-sufficiency in P_2 with P_2C_2 of A

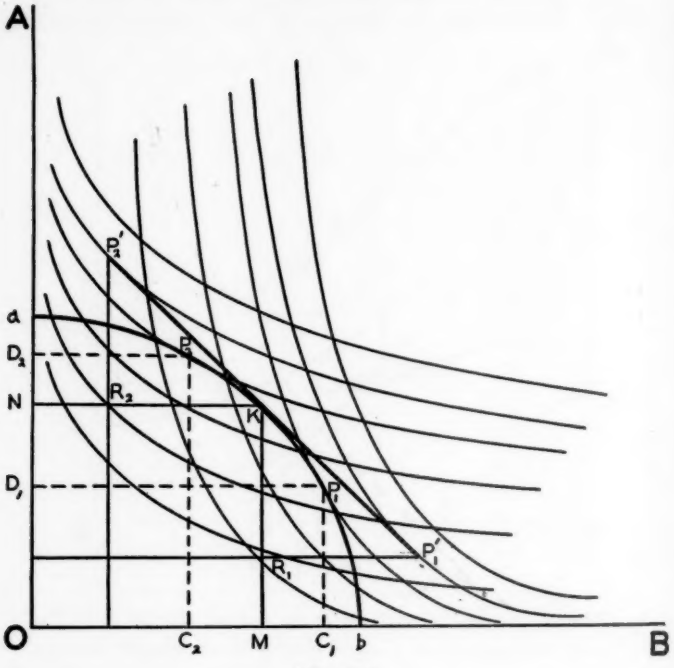

FIGURE 7

and P_2D_2 of B-stuff produced and consumed. Applying our previous reasoning, we find that both countries will profit by exchanging part of their products. Each will produce, after the international equilibrium is reached, NK of B-stuff and MK of A-stuff, respectively. But according to their different needs, they will redistribute their equal products by mutual exchange. Country A will attain its highest utility point P'_1

by moving along the exchange line from K to P'_1, while country B will proceed an equal distance in the opposite direction, from K to P'_2. The trade between the two countries will consist in exchanging $P'_2R_2(=KR_1)$ of A-stuff against $P'_1R_1(=KR_2)$ of B-stuff. The case is not as artificial

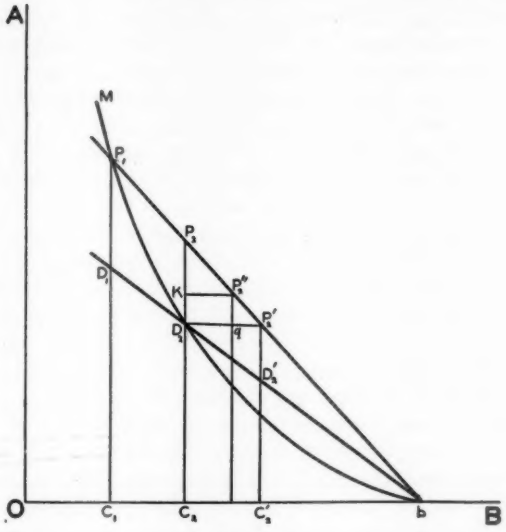

FIGURE 8

as it may appear at first sight. It may partly explain the highly developed interchange of commodities between countries with similar industrial structure.

The influence of an import duty is illustrated in Fig. 8: the dotted curve MP_1D_2b represents the "demand curve" (the same curve as the demand curve in Fig. 2). Under conditions of free trade, P_1 is the equilibrium point if P_1b represents the path of exchange. Imposition of a duty means that a certain part of imported goods or an equivalent amount of the B-stuff has to be surrendered to the customs officials. If P_1D_1 is the amount of the tax (which is supposed to be

ad valorem), D_1 represents the new (reduced) utility point of the consumer under the fictitious assumption that the amount of trade is not altered. The net exchange line is bD_2D_1 the slope of which represents the domestic terms of exchange between A-stuff and B-stuff. This utility point can be displaced in either direction along the $b_1D_2D_1$ line by a corresponding contraction of expansion of foreign trade.

The new maximum utility position is indicated by D_2 which is the cross point of the demand curve MP_1D_2b with the net exchange line bD_2D_1. Should the whole (proportionally reduced) amount of the duty be paid in A-stuff, the external equilibrium point would be P_2; P_2C_2 representing in this case the total imports, P_2D_2 the quantity of A-stuff surrendered to the customs and D_2C_2 the remainder "on hand." The same utility point, D_2, could be attained if the total trade would be reduced to P'_2 but the amount of the tax which, estimated in A-stuff, is now equal to $P'_2D'_2$ would be actually paid in an equivalent quantity, D_2P_2' of the home-made B-stuff.

Between these two marginal cases many intermediate ways of discharging the duty are possible. Stopping at P''_2 the movement along the exchange line bP_1, it is possible to discharge the duty by surrendering P''_2K of B-stuff and P''_2q of A-stuff, so that D_2 will still indicate the "net" position of the consumer. In a monetary economy the "distribution" of the duty between the two kinds of goods is equivalent to the question how the government spends the money collected. The effect of the duty evidently depends to a large extent upon the form of the demand curve, MP_1D_2b.

The same method of approach can be directly applied to a case where an opportunity cost curve is introduced.

When speaking about the ultimate utility point attained, we have of course to distinguish D_2 and P''_2 (or P_2, or P'_2). D'_2 represents the utility attained directly by the consumer, P''_2 (or P_2 or P'_2) indicates the "total" utility position of the country, including the market value of goods collected in payment of the import duties (estimated on consumers indifference curves).

The previous analysis was conducted on the assumption that the slope of the exchange line is fixed.

This limitation can be removed, and a complete picture of all the interrelations obtained, by taking into account the other country. The reduction of imports which results from the new tax will eventually shift the terms of trade. The character of the shift as well as the resulting change in the quantities of imports and exports depend upon the cost curves of the two countries and their respective lines of indifference.

This method of treatment can be readily extended. Another commodity can be introduced by adding a third dimension. More "countries" with their respective indifference lines and cost curves may be included in the same diagrams. Capital movements and the general transfer problem can also be analyzed by the method. The monetary side of the problem can be attacked by the introduction of special "monetary indifference curves"; but these are not treated here because they would call for a fundamental discussion of the theory of money and credit.

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THE LITERATURE OF THE CRISIS[1]

There are three planes, at least, upon which interpretations of the current predicament of industrial society proceed. One views the unfortunate events of the past three years as the outgrowth of the boom years immediately preceding. In another view, taking a longer range perspective, we are simply suffering the consequences of the World War. Upon both these planes the present ills are ascribed to economic debauchery. But upon the third plane, adopting a still longer range perspective, the crisis is seen as the final eruption of social "faults"— a historical earthquake resulting from a tension produced by opposing tendencies or forces in society which could no longer be withstood.

Upon the first plane, we are confronted with the necessity of dealing with a cyclical maladjustment of industry — "controlling the business cycle." Upon the second plane we are confronted with the necessity of restoring a normal, peace-time interrelationship of industries and of finance and industry — "paying for the war." Upon the third plane, we are confronted with the necessity of readjusting our whole scheme of values, our settled usages, and ways of life —

1. A classification of analyses of the crisis according to range of perspective is here attempted. The multiplicity of factors involved leads to the hypothesis that no one formula will suffice to explain what has happened. Books representative of each type or standpoint included in the classification are critically examined. Those discussed are: Hollander, Jacob: Want and Plenty. Houghton, Boston, 1932. Graham, Frank D.: Abolition of Unemployment. Princeton University Press, 1932. Patterson, Ernest Minor: America; World Leader or World Led. Century, New York, 1932. Withers, Hartley: Everybody's Business. Smith, New York, 1932. Cole, G. D. H.: A Guide Through World Chaos. Knopf, New York, 1932. Bonn, Moritz J.: The Crisis of Capitalism in America. Day, New York, 1932. Ortega, Jose: The Revolt of the Masses. Norton, New York, 1932.

Others mentioned are: Cassel, Gustav: Crisis in the World's Monetary System. Oxford University Press, New York, 1932. Donham, Wallace B.: Business Adrift. McGraw, New York, 1931. Fairchild, Henry Pratt: Profits or Prosperity. Harper, New York, 1932. Fisher, Irving: Booms and Depressions: Some First Principles. Adelphi, New York, 1932.

"constructing a new social order." In the first view, something is wrong with ourselves; our common predicament is the bitter fruit of seeds of our own planting, the penalty for numerous and frequent individual mistakes. In the second view, something is wrcng with our statesmen; the misery of the present is a retribution for the heedless following of blind, if not iniquitous, leaders in the reckless pursuit of glory, a penalty for mistaken governmental policies, not only in bringing on the war but in waging it, in settling it, and in meeting its aftermath. In the third view, something is wrong with our institutions; our helplessness and want spring from a deep-seated institutional conflict, a disharmony between the habits of thought, standards of value, and modes of action in various spheres of social life which, unresolved, balks every good endeavor. Industry has "slowed down" and cannot "get started" again until sufficient unity of purpose and concord of method have been restored to a society set against itself to permit the impulses which would move us in one direction or another to have unimpeded sway.

Which of these three modes of interpreting the crisis is correct? Upon which of these three levels of economic unsettlement do we stand — or rather, grovel? The simple truth is that each mode of interpreting it is correct, and at the same time is incorrect. We stand simultaneously upon three levels! And that, indeed, so far from being impossible — a contradiction in terms — represents the most vitally significant feature of the whole situation. It is this very fact which renders abortive all efforts to deal with the problem *as tho* it were purely and simply a matter of cyclical depression, or of post-war readjustment, or of institutional lag. Schemes for credit easing, government relief measures, public works programs, flexible bankruptcy measures and even for currency expansion might do very well, might indeed already have carried us out of the slough, if only the crisis were nothing more than an ordinary business depression. Likewise, the settlement of reparations, scaling down of inter-

governmental debts, postponement of taxes, and readjustment of industry might long ago have been achieved, and have yielded substantial results, were the crisis which engulfs us no more than "the price of glory." And the utter failure of schemes of institutional reconstruction, which is to say social revolution, to take effect (as the ephemeral interest in Technocracy witnesses) springs fundamentally from a sound, even if only intuitive, awareness, certainly falling far short of a clear realization, that this crisis is something far more than the slow drag of some moribund institution impeding the tangential course of some new and vigorous member of the same family.

In a word, the crux of this crisis lies precisely in the fact that it has no crux, but has a number of cruxes. In a way, tho unfortunately only implicitly, this vital fact is revealed in most of the literature of the crisis, so far at least as represented in the books herein passed in review. Few of the authors have completely ignored the influence of phenomena of another order than of that in terms of which they proceed each to his distinctive interpretation of our dilemma. Yet without exception there has been no explicit recognition of the vital significance of the conjunction of the forces operating upon these several different planes in precipitating the economic collapse. Each writer has focussed attention upon one "face" of the crisis, subordinating, if mentioning at all, its other "faces." The deficiency of this mode of dealing with the problem is perhaps most apparent in connection with those analyses which take the shorter run views; and the realization of these aspects of the crisis is naturally far more prevalent than the appreciation of the institutional maladjustment.

Most conspicuous for its comparative indifference to any more profound considerations than errors of individual judgment in investment, in business management and in consumption is the little book by Professor Hollander, "Want and Plenty." It emphasizes the fail .re of economists to solve the riddle of the business cycle, but expresses a strong conviction, notwithstanding, that its basic cause will eventually

be isolated, even as medical science will assuredly discover the true cause of "common colds" and so prevent them. (The specific comparison is revealing.) Meanwhile, the most promising procedure (as with colds) is to live wholesomely and carefully. Avoid exposure! Each of us should live within his income, invest with prescient discrimination (never speculate), work assiduously if the opportunity comes, and be patient if it does not — these and similar economic homilies point the way to restoration, and Plenty.

Our present Want comes from neglect of these simple truths. Of course, the statesmen too have erred, but their errors turn out on close examination to have been no different in kind from those which have "upset the normal equilibrium" in the sphere of private economy. Especially the vice of seeking "something for nothing" as practised in the financing of the war, which resulted in inflation, comes in for a condemnation almost intemperate. None the less, all those sinful business men who induced us to take up buying on the installment plan, the iniquitous bankers who so far forgot their sacred obligations as to use the funds entrusted to them for making a neat profit for themselves, and the knaves on the stock exchanges who beguiled us into the market, robbed us, and then lashed us out of it are also, so it appears, more than ordinarily blameworthy. Nevertheless the essay ends upon a note of optimism: "The United States will emerge from its years of famine, thanks to the curative force of economic motives, hastened perhaps by empirical alleviatives. . . . But the real problem — the succession of plenty and want — still remains. To its solution economic science must rededicate itself." Amen.

In "The Abolition of Unemployment" Professor Frank D. Graham is not so much concerned with the analysis of our difficulties as with the method of overcoming them. Indeed, he gives the distinct impression in one passage that the task of determining the cause of the crisis is a hopeless one. Doubting that economists will be able to make an accurate diagnosis of the illness, he launches at once into the problem of providing a remedy. This is an ingenuous procedure. It

is, in other words, what common sense dictates. No one will suggest, we suppose, that it bears the slightest resemblance to the procedure of science. Happily, Professor Graham makes no pretense that it does. He is addressing himself to practical men. He appeals for action. The distress, in his opinion, has become unbearable. There is nothing for it but to "do something." So he proposes what should be done.

In good common sense fashion he disposes of all the "theories" and "interpretations" of the crisis as incongruent one with another and therefore, presumably, cancelling out. He scoffs at all this "wrangling over what brought us to such a pass" and demands an end to this "dithering in the face of the enormous, and unnecessary, evils of unemployment." This strong expression of "disgust" with theorizing (coming from a theorist tho it does) should not be taken at a lower discount, however, than that commonly applied to like protestations of admittedly practical men. As in the latter cases, so here, it is only a covert method of clearing the way for the application, or exposition, of the preconceived and unavowed theory of the man who "wants action." If there is any difference here from the ordinary case, it is only in that one need not ascribe the procedure to that utter disingenuousness which characterizes the "givings forth" of the common wayfarer. It seems much more plausible to account for Professor Graham's attitude, having in mind his background, as a deliberate device for "smoothing the way" for the acceptance of the proposals he has to offer, among the men of affairs to whom he is appealing.

With the specific suggestions of a program of action we are not here primarily concerned. It will suffice to indicate their general nature, for it is only partly from the plan itself that one gleans the general outline of Professor Graham's theory of the current malady. He proposes the creation of an Emergency Employment Corporation empowered to make contracts with manufacturers to supply, and with merchants to distribute, necessary products, chiefly consumption goods. The labor required in all operations would be paid in Consumption Certificates issued by the Corporation, each cer-

tificate representing an aliquot portion of the total units of goods produced, and redeemable solely in such goods, tho not in fixed portions of each kind of product, the holders of the certificates being free to choose the particular varieties of product desired. The raw materials required would be purchased likewise, and the contractual payments to the manufacturers and merchants made, with the certificates wherever and to the extent that they were acceptable. As by its charter the Corporation would be constrained to make these contracts on a basis of free negotiation, however, and in most cases consent to the use of plant or to the supplying of materials could only be had for good money in hand, provision is made for the sale of certificates to the public to procure the funds. To insure the redemption of the certificates and to forestall the accumulation of unsold stocks, the certificates would be made subject to a discount of five per cent per month from date of issue, the purchasing power of successive new issues being increased in proportion to the amount of stocks undisposed of against which the discounted certificates had been issued. Gradually, it is assumed, with the "restoration of confidence" and the readjustment of the price structure through readjustment of the supply and demand relationships of different goods, the prospects of profits would be restored, workers would again be hired for money wages by their employers, and the Emergency Corporation would cease operations.

The premise underlying this elaborate construction is the righteousness and soundness of "our existing economic system," which, being defined, tho for the most part only indirectly, in the course of eulogy, turns out to mean an "automatic," "free," "private," "enterprise" system (p. 9). One may doubt, as Bryce did of the Holy Roman Empire, that it is either automatic or free or private or enterprising or systematic, considering the growth and functioning of giant corporations in our times, but one's doubts will not be resolved by anything that Professor Graham offers by way of analysis of this hoary figment. The author's bias is not concealed, even tho it may not be explicitly avowed. "The only real

alternative to our present system of contract is regimentation. Regimentation and shooting go hand in hand" (p. 10).

Our troubles proceed, hence, only from errors of judgment, and these are unavoidable under any system (p. 12). But the superior efficiency of the free private enterprise system "normally" should counsel us against any action in an emergency save the provision of a stop-gap (p. 37).[2] Moreover, this temporary device should so far as possible avail itself of the splendid equipment and organizing genius of the redoubtable enterprisers (for the moment wallowing in the mire of their own mistakes). In this way, incidentally, a helping hand may be extended to these poor fellows at the same time that we are engaged in the chivalrous enterprise of succoring the even more unfortunate unemployed. Indeed, it would appear to be no perversion of its essential contents, to do no more than justice to the author's efforts, if the book's title were amended to read: The Abolition of Unprofitability and Unemployment. The concern shown for the protection of business interests and the restoration of profits is by no means eclipsed by the solicitude shown for the interests of those who live by labor.[3] Occasionally, it is true, faint misgivings crop out,[4] tending to indicate that all may not be well with the private enterprise, free market economy. But the general drift of the exposition leaves untouched the question of the salubrity of traditional public policy. The

2. A few sentences from the text may serve to exhibit more clearly Professor Graham's strong convictions on this point. "In times of crisis we should husband all our resources to deal with the existing emergency. It is then a dubious service to challenge institutions which the bulk of our population sincerely cherish. No one can deny that those institutions fail to work smoothly, but that is small reason for throwing a monkey wrench into the machinery. The requirement is rather for lubrication; we cannot afford to increase a friction already dangerously high."

3. See, e.g., pp. 10, 13, 14, 37, 80, 96.

4. As on pp. 77, 84, 85. The most significant passage, the implications of which appear not to have been realized, begins on p. 84. "The business and pecuniary . . . economy which has developed in the process of increasing specialization . . . tends to blind us to realities. We see things in terms of the struggle over the sharing of output rather than in terms of the struggle against a more or less refractory nature."

Hooverian dictum, "Fundamental conditions are sound," reëchoes through these pages.

In general, this acceptance of the *status quo ante*, taken in conjunction with the deliberate dismissal of "theorizing," leads to numerous and patent incongruities in the exposition. In one place, depression is caused by "general underproduction"; in another the cause is "simply and solely lack of profits"; in still another it is "due to dislocated price relationships," which in a later passage turns out more specifically to mean "maladjustments between commodity prices on the one hand and rents, interest, and other . . . inflexible . . . costs of production on the other"; again, it seems to be caused by the accumulation of an insupportable debt burden, overcapitalization.[5] While one may agree with the author in rejecting the whole range of overproduction and bad distribution theories, it can hardly be gainsaid that this series of positive pronouncements stands in need of articulation. More than that, if the main thrust of the explanation be directed towards some one or all of the last three theories of causation mentioned, instead of towards the first two, the thoughtful reader will find difficulty in sharing the author's confidence in the corrective influence of his scheme for an Emergency Employment Corporation.

Quite aside from this, however, the practical feasibility of the project deserves scrutiny. This is not the place for an extensive examination of the administrative problems which would arise in an attempt to put the scheme in operation. It may be permissible to indicate, however, some of the questionable assumptions upon which its workability depends. Among the things assumed are: (1) honesty and good faith of contracting employers, (2) an easy and definite division of current product between the employer and the Corporation, (3) ready determination of *just* rentals of productive equipment, (4) a facile and fair apportionment of shares in the Corporation product among its employees, (5) mobility and adaptability of labor, and (6) that the effect upon the price level and the price structure in the open market would

5. Cf. pp. 12, 73, 75, 77, 78.

be, if not salutary, at least nugatory. Finally, one cannot lay aside the book without the suspicion that everything proposed here could be more effectively done through a direct frontal attack upon unemployment by government, hiring idle workers, contracting for materials, and disposing of supplies, *on a purely monetary basis*. But that, of course, would cut athwart some established prejudices and even jeopardize some vested interests. The author, therefore, carefully eschews any suggestion of action along these lines. "Proposals here made do not necessitate governmental action. They could be put into effect . . . by *business men*."[6] In the end one cannot escape the conviction that here is another good economist all tangled up in the meshes of indefeasible private rights and conflicting private interests — in the cobwebs of *laissez faire*.

If Professor Ernest Minor Patterson had not burdened himself with a multiplicity of objectives, and if he were blessed with a single-track mind, his brochure upon "America: World Leader or World Led" would be a more effective exposition of the middle-range viewpoint. The simple, terse style and the frequent resort to example and data from practical experience, never too complicated and never advanced as proof, serve to make easy reading, tho it may be doubted that it is correspondingly illuminating. The book consists of the substance of a series of lectures addressed to a foreign audience; and the effort to convey an intelligible notion of what America is like (this it was he proposed to discuss), making up perhaps a third of the text, contributes little to the understanding of the country's predicament. In sum, the author devotes much of his space to "drawing a picture," instead of to analyzing a movement, which, if skillfully done, as Professor Moritz Bonn shows in a work shortly to be examined, can not only accomplish both purposes but do a better job in respect to the former than if that be undertaken directly.

When one comes, eventually, to the analysis of the crisis one finds the same thesis that Professor Patterson expounded

6. P. 37. Italics mine.

at greater length and in more detail in his earlier book, "The World's Economic Dilemma." Its substance may best be set forth perhaps by a brief quotation: "There are two groups of economic forces operating today. One binds the world together, the other divides it into antagonistic areas. The first makes us profoundly dependent upon each other, the second separates us because there are certain particulars in which our interests are not harmonious. . . .[7] This is the dilemma. On the one hand, all people have an interest in freedom of trade, in active business relations. On the other, there are interests that are best served by nationalistic action."[8] This is a welcome, if mild, antidote to Dean Donham's thesis in "Business Adrift." It is shown that in the face of what might almost be termed a revolutionary growth in the scope and intensity of economic interdependence among different parts of the world, there has been an actual increase latterly in the number of sovereign states and a continually more aggressive striving for nationalistic self-sufficiency. It might appear that the dilemma, so conceived, could be more accurately expressed as a conflict of economic forces pulling in one direction — towards world unity — and of political forces pulling in the opposite direction — towards world division. But Professor Patterson will not have it so. In his view the separatist tendencies of nationalism, the obstructive forces of patriotism, are ultimately but the expression of certain genuine, particularistic economic interests. So far do they appear to him from being illusory, they are legitimate and even vital interests best subserved by nationalistic, protectivist policies — as witness the last sentence of the quotation and numerous confirmatory passages elsewhere throughout the book.

In these circumstances, the problem would appear to be, therefore, first, how to separate the "harmonious interests" from the "conflicting interests." Secondly, having consigned the former to the responsible guardianship of a "partial" super-state, or perhaps of an international coöperative organ-

7. Ibid., p. 64.
8. Ibid., p. 85.

ization, the problem would remain of reconciling the several antagonistic interests as cultivated and defended by the numerous national states, which, by assumption, can "best serve" them. This presents a sizable problem, indeed! And if and when it is finally solved, there may still be some little difficulties to "iron out" among the modicum of "conflicting interests" which, as Professor Patterson freely allows, have not yet been entirely eliminated within the nationalistic frontiers. But these, one gathers, are mere trifles compared to the major competitive struggles between nationalistic economies bent upon self-help, and that, too, in their incidence upon the current well-being of common men everywhere.

One would be oversanguine, indeed, starting from this conception of the problem, to expect any clear indication of how the present crisis developed, of the part played by America in bringing it about, why it came when it did, or of what definite steps might be taken to overcome it. Instead, there is much reiteration of more or less obvious half-truths. Americans are neither wiser nor more stupid than other people. All men seem to be blessed — or damned — with a nice balance of common sense and folly. Leaders could not lead, unless followers chose to follow. "It would be easy to suggest" this or that — for example, that the United States should perhaps reduce its tariff — "but there is another side to the picture." If it is a question of shipping policy, "we in America should . . . consider further our policy toward our merchant marine. . . . The part America should play in this direction is one that we have not yet examined with the care which it deserves."[9] Reservation of judgment, when carried far enough, approaches equivocation.[1] Poise may be an admirable trait under all conditions, but it is far more admirable in a runner than in a man standing still. When we are

9. P. 122.

1. Certainly, if one of the basic causes of the crisis is a growing inability to make decisions and to give forthright expression to them — as has been alleged (see below) — that failing has been nowhere better exhibited than in this book.

told that "Today more direction is imperative,"[2] this economist for one would like to know *what* direction the "more direction" (regulation?) is to take, how it is to be organized, to whom it is to be entrusted, and for what purpose it is to be exercised. If the only answer is that "We must study more and more what makes the world prosperous and seek to secure coöperation throughout the entire world. In some way, somehow and swiftly, there must be developed more rapidly . . . a world economy in which national groups as such will be subordinated. The alternative is a terrible one," — why not resort to prayer?

It is, in truth, something of this nature which Mr. Hartley Withers proposes in his new book, "Everybody's Business." Its keynote is an appeal to understanding and good will. The former editor of the Economist employs his facile pen and subtle powers of persuasion to advance the thesis that everything is "fundamentally sound." Our troubles have arisen only from a general failure to observe time-honored standards of self-restraint, magnanimity, and, indeed, ordinary decency in our dealings one with another. The enterprising endeavors of honest and industrious elements in the community, most conspicuously represented by capitalists and business organizers, to enlarge the common "cake" would enable each of us to secure an ever bigger and bigger slice were it not for the ill-will engendered by the covetousness and suspicion of disaffected elements. Let everyone be contented and docile, tenaciously sticking to his own last, however humble, and once again we might become prosperous.

It is all so simple one wonders how cupidity could ever have become so infectious. Why did the disaffected elements become disaffected? How did suspicion, truculence and ill-will arise, if they are at once so groundless and so mischievous? Mr. Withers offers no serious explanation of the unfortunate development. He does refer vaguely to the sidetracking of the car of progress on the War spur, but he gives one to understand that somehow it got, or was put, back on

2. P. 62.

the main line after 1919. For is it not plainly shown that while monetary policies, central bank policies, reparation policies, tariff policies and the like have been shifting and unsettling the economic equilibrium, these disturbances could none of them, or all of them, have stopped the growth of society's "cake" had men only gone ahead with sweet reasonableness about their tasks? None of these impediments to production and trade could have interposed insuperable obstacles, one gathers, to the "normal functioning" of industry and finance if only there had been confidence in one's fellows and in the future and a general determination not to be diverted from the work in hand.

So numerous are the books interpreting the crisis primarily from the standpoint of the operation of the monetary mechanism and so divergent are their viewpoints, it has seemed best not to undertake in this survey a critical examination of them. It must suffice to point out that by no means do they all fit into any single category of interpretation as outlined at the beginning of this paper. Professor Irving Fisher's new book "Booms and Depressions" may be taken as a good example of those which stress the cyclical approach to the crisis. It sets forth his now familiar thesis that the primary cause of wide trade and price fluctuations is the lack of correspondence, under existing monetary standards and banking practice, between the changes in the supply of money (and credit) and the changes in the demand for it. Professor Gustav Cassel's reprint of a series of lectures upon "The World's Monetary Crisis" traces the chief responsibility for our predicament to mistaken central banking policies issuing largely from the disturbances to trade and the excesses of finance arising out of the war. Finally, the flamboyant and ill-digested literature of Technocracy may be taken as representative of a number of books which ascribe the breakdown not to the inadequacy of a particular monetary standard or to the abuses of credit but to the existence of "the price system" itself. In this particular case the attack upon the whole institution of the market is coupled with an interpretation of the radical significance of recent technological ad-

vances, which might provide abundant warrant for critical interpretation were the theses systematically developed and consistently expounded. But they have been enveloped in such an aura of mystery, esoteric formulae, and sectarian dogmatism as to afford little opportunity or occasion for objective appraisal. In many ways the technocratic sect is reminiscent of the physiocratic sect. It has its sacerdotal leader, its egregious claims of originality and potency; and quite possibly the only reason the Law of Energy Equivalents has not already been added to Mercier de la Rivière's divine trilogy of writing, money and the Tableau Economique is that the second and the last terms of the diadem would cancel out. Perhaps, however, in matters divine the trinity must and will be preserved.

Returning towards the mundane level, now, it is fortunate that the descent may be checked at an altitude well above the hard and scrubby surface of things — where we can still get a good long-range view. Mr. G. D. H. Cole's "A Guide Through World Chaos" will furnish a convenient stopping place.

It is a singular fact that economics has popular appeal, arouses widespread interest, only when its dominant note is tragedy. When Malthus and Ricardo uncover a stark fate and offer no hope, then Carlyle and Ruskin and De Quincey, not to mention Marx and Proudhon, take up the cudgels of protest. A "dismal science" becomes at least a subject of lively concern. When Pareto and Clark and, with them, a majority of the marginal utility school, disclose the inner harmonies and offer a facile optimism, economics becomes again an exercise for academic cloisters. But once the pungent satire of Veblen, the stupendous erudition of Sombart, and the floundering of the lesser institutionalists have combined to reveal the tragic motif of this economic drama, the dismal science is again by way of becoming a genuinely vital subject of public discussion. Mr. Cole, like our own Mr. Stuart Chase, is, if not quite a Carlyle, a reasonably doleful writer. As usual, the adage is wrong, or at least somewhat less than half true: those who weep do not weep in solitude.

It is impossible in a brief review to undertake a critical analysis of every issue which Mr. Cole has discussed in the 549 pages of his economic baedeker. The round-the-world itinerary he has laid out includes stop-overs at every point of controversy on the economic sphere: Fundamental Principles, Machine Age, Business Cycle, Gold Standard, Central Banking Policy, International Trade, Trusts, Stock Market, Balancing the Budget, Marxism, and so back to Fundamental Principles (with many intervening "points of interest" not mentioned). It must suffice to indicate here merely the general manner of his exposition and the basic standpoint of his attack. Of the former it may be said that he exhibits a commendable restraint, poise and lucidity. He offers the reader sufficient, pertinent facts as a concrete basis for the discussion of every issue. Save in the treatment of socialism (pages 493–500) (with one or two other exceptions of slight importance), and there perhaps unavoidably, little indulgence is shown for abstruse philosophizing. Mr. Cole reveals, indeed, a genuine skill in treating basic issues in terms of concrete experience, *i.e.*, of practical difficulties and of practical achievements.

The fundamental standpoint of the book may be tersely stated. Chaos in the economic world is traceable to, and is indefeasibly bound up with, the system of profit-seeking enterprise, or capitalism. The reason that this pseudo-system leads inevitably to chaos is that it does not insure, indeed prevents, such a distribution of the product of industry as will keep consuming power in balance with producing power. Otherwise stated, perhaps somewhat more accurately stated, markets are prevented from discharging their normal function and are becoming chronically disorganized and unbalanced by the bad distribution of income whereby the purchasing power of consumers is rendered inadequate to absorb the potential output (on a cost-indemnifying basis) of producers. (Cf. pp. 18, 115–18, 130, 141–4, 174–6, 257, 484, 518–19, and elsewhere *ad indefinitum*.) The only trouble with this standpoint is that it is based upon a fallacy. No economist worth his sugar will fail to recognize it. The fre-

quency with which it keeps bobbing up in the literature of the crisis makes it necessary, nevertheless, once more to lay it low. But as it also comes to the surface in the next book to be examined, criticism will be deferred to that point.

More than an analysis of our current predicament is "The Crisis of Capitalism in America" by Professor Moritz J. Bonn; it is a brilliant survey of American economic life. While it suffers from an incredibly infelicitous translation, the reader who has the patience and pertinacity to surmount the diction hurdles will find ample reward for his efforts. The basic dilemma in which our society is ensnared is interpreted as an institutional incompatibility: the endeavor to maintain an individual, personal, family life in the face of the powerful socializing forces generated by the industrial process. In this respect the American problem only epitomizes the central problem of modern culture in general. But the difficulty is more evident and more acute in America than in Europe for several reasons. In the first place, the European on account of a radically different historical background characteristically "shapes the present in accordance with . . . the past," whereas the typical American "shapes the present in accordance with . . . the future." One is dominated by his "recollections" (traditions), the other by his "aspirations." Hence, in Europe the basic institutional incompatibility has not become as yet so plainly visible: the European has not countenanced the development of the machine technique to an extent that it seriously threatens the displacement of his cherished privacy. In America, on the other hand, the forces making for increasing efficiency in production have been accorded practically free rein, and their bent being, in accordance with the dictates of the machine technique, towards extreme standardization, the impulses making for the preservation of a measure of privacy, taste and self-expression in consumption have been severely hampered. In a word, and a vulgar one at that, mass production has been "cramping the style" of individual consumption.[3]

3. The converse holds equally true, of course; but unfortunately Professor Bonn fails to develop this aspect of the situation. If he had he

Industry has been forcing a revaluation and a new orientation upon life.

This process might have continued gradually and more or less unconsciously had it not been for the war. The acceleration of its tempo in the United States and the imitative transfer of American methods and conceptions to Europe, consequent upon modifications in the relative strength and prestige of different classes within this country and of the different nations in the world (America to the fore), have wrought a transformation within a few years which might otherwise have been spread over several generations. In the latter alternative, "the ultimate change would not have made itself felt (become explicit) until the generation which had witnessed its gradual growth was qualified to take command of affairs." As it was, instead, the actual leaders in industry, finance, and politics during the decade of the 'twenties rode upon the crest of the revolutionary wave, thinking of themselves, and being thought of, as supermen, mastering alike Nature and Industry, but all the while completely oblivious of the radical institutional incompatibility which everything they did was accentuating. They were, indeed, unaware of what large-scale mass production ineluctably required in the way of socialized (standardized) consumption. There was, consequently, no deliberate attempt either (*a*) to check the march of the machine technique in production, or (*b*) to get rid of the incubus (from the producers' standpoint) of the moribund institutions dominating the consumption process, such as the family.

Professor Bonn does not permit one for a moment to infer that the socializing process (on the consumptive side) is necessarily good or beneficent. Indeed, his own predilections point manifestly in the opposite direction. Nor does he leave the impression that the socialization tendency has been absent. Quite the contrary; it has developed spontaneously and substantially, even tho, from the standpoint of the balance of social-economic forces, inadequately. With a dis-

might very well have found in it a clue to the explanation of the current collapse less dubious than the one which, as we shall see below, he does follow.

cerning eye and a sound judgment, he goes directly to the American home and traces the extent and manner of its transformation under the impact of the standardizing, cheapening tendencies of the machine technique. The wit and wisdom of these pages have not been surpassed in any analysis of our basic dilemma whether from literary or scientific pens. He finds the impact of the machine technique upon the traditional home life to have started movements in two primary directions: (1) the mechanical implementation of the ever more diminutive private domicile with everything from automatic heating appliances to electric shaving mugs and curling irons, and (2) the prodigious development of consumption industries most conspicuously exemplified in the automobile, the cinema and the radio, but hardly less in restaurants, soda fountain lunch counters, and hotels. "The little house without servants' quarters, and equipped with every conceivable mechanical domestic contrivance, is the last effort of American family individualism to preserve the family and the home."[4] "The American people, the four walls of whose home formerly circumscribed its world, . . . have once more become nomads, who use houses only as sleeping places and spend their lives in motor cars, hotels and cinemas."[5] The upshot of these tendencies, abetted by the high-wage-prosperity doctrine and the installment-sales policy for overcoming the thrifty Puritanical disposition of common men to live within their incomes, was to create such a febrile market and demoniacal speculation that not even the wizardy of business forecasting could forestall the fatal plunge over the precipice in 1929.

The true inwardness of the crisis consists in the extent of the disillusionment of men in their leaders. The captains of industry and financial magnates had been idolized in the 'twenties, when Big Business was consummating titanic

4. P. 60. Also: "The purpose of canned foods . . . is to save labor. They are a substitute for the cook and the culinary art. Tinned California peaches and Alaska salmon furnish a standardized, almost communistic, diet, by the aid of which it is still possible to (pretend to) lead a private, personal life." Ibid.

5. P. 49.

mergers and stupendous financial deals at home and abroad. The humble citizen basked in the reflected glory of their power and prestige and in this way was lulled into a tolerant indifference to the eclipse of his own opportunities and forthright initiative with the passing of the frontier and the advance of capitalistic concentration. Now, shorn of his former self-reliance and independence, and duped by his erstwhile idols, he is turning not simply against the present pseudo-leadership or particular economic policies, but against the capitalistic system itself.[6] Violent revolution is shown by a penetrating analysis not to be reckoned among the probabilities, but hardly to be put beyond the bounds of possibility, nevertheless. For Americans have been undergoing, under capitalism, an intensive training course in communism — without knowing it!

If economic leadership in the United States has in truth become defunct, one naturally turns to inquire more closely in what specific respects it has shown itself deficient, and thereby to learn precisely how capitalism may conceivably be extricated from the jeopardy of imminent extinction. Professor Bonn is far from clear and explicit upon this question, even making due allowance for the faults of translation. But one gathers the impression that his personal judgment (and secret wish) is that capitalism is not doomed. He seems to take about this position: if a new economic leadership in the United States should emerge, committed to the correction of two specific deficiencies or errors in the policies of its predecessor, capitalism might yet be saved. These errors were: (1) failure to realize and act upon the necessity of maintaining an adequate volume of consumer purchasing power, and (2) failure to appreciate the responsibilities entailed as the chief creditor nation in the increasingly intricate world economy.

With regard to the first of these strictures upon the policies of the defunct business leadership, it will be recognized at once as the most prevalent point of attack upon the whole capitalistic system. It is the whole theme of Professor Henry

6. P. 190.

Pratt Fairchild's "Profits and Prosperity," the central core of Mr. Cole's "Guide through World Chaos," and it appears in various guises in a large number of the books embodying amateur prescriptions for our economic ailments. The circumstance that the formula is not a "new discovery," as few of those who propound it seem to realize, but reached full and final expression in Marx and has been frequently reiterated and refurbished in the pre-war literature of economic reform, notably by Mr. John A. Hobson, should not of itself dispose of its fallacy, of course. But the circumstance that no genuine economist of outstanding professional reputation as a theorist has ever embraced it, not to mention that most of them have been at pains to unmask it, should go a long way towards discrediting it.

That there is an inherent tendency towards disequilibrium in capitalism *per se*, *i.e.*, the direction of production under the profit motive, is simply absurd. The whole joint product of industry in any period is the same as the aggregate income of the community during that period; it cannot be more and it cannot be less. The aggregate income of the community represents the total available purchasing power of the community, nothing more and nothing less; for the transfer of capital assets, representing past income, can neither enlarge nor diminish the current flow of products which is the stream for which the deficient-purchasing-power critics are concerned to find an "outlet." On the other hand, an addition to the community's stock of capital assets, through savings from whatever type of current income derived and in whatever volume effected, constitutes a demand for a corresponding part of current production. It follows that the total available purchasing power of the capitalistic community must be exactly equal to the joint product of industry, however swiftly the latter may be increased and however *inequitably* it may be distributed.[7] Yet Professor Bonn, usually an ex-

7. The foregoing is not to be taken as an exhaustive refutation of the fallacy, of course, but only as an outline of the essential steps of the argument. For a fuller consideration of the issues the reviewer may be permitted to refer to his article "Commercial Banking and Capital Formation," in the Journal of Political Economy for July, 1919, Vol.

emplar of caution and circumspection, starting from the innocent and in one sense perfectly true statement that "The crisis was ultimately due to the misuse (misapplication) of capital,"[8] permits himself by gradual degrees to be drawn into the obvious fallacy which has ensnared so many near and would-be economists ever since the days of Marx. He continues thus: "The savings which production surplus had yielded . . . had been spent in the construction of new production plants . . . in the hope that consumers . . . would grow up automatically. The capitalist world . . . has formed the habit of conveying credit, . . . derived from or built up on savings . . . , mainly into the channels of production . . . — whereas consumption is left to itself. . . . So it comes about that production . . . far outstrips consumption both in time and quantity."

The plain inference from all this, and more and worse, is that consumption must somehow be accelerated and expanded in order to enable it to "keep up with" production. As tho an effective demand for some portion of the joint product of industry, or at least the potential product measured by available capacity, would otherwise be lacking! The source of the fallacy lies, of course, in the erroneous assumption that production and consumption must somehow be kept "in balance," in the sense of quantitative equilibrium, else production will have to be "slowed down" and depression and unemployment endured until a "balance" is restored. This assumption rests, in turn, upon the naïve belief that income which is not "consumed," but "saved," does not constitute a demand for the current output of industry. More puerile nonsense than this would be hard to imagine, and were it not for the frequency and volubility with which such ideas are put forward, even occasionally — alas! — by economists with a respectable reputation, like Professor Bonn, the space

XXVII, p. 578. He would recommend in this connection, also, the excellent article upon "Consumption and the Trade Cycle" by Professor Lionel W. Robbins, in Economica, November, 1932.

8. P. 141.

of a professional journal would not need to be encumbered with their refutation.[9]

It is only fair to say that Professor Bonn puts more weight upon the other leg upon which he supports his (apparent) position that a new economic leadership in the United States might retrieve the blunders of the leadership now defunct — and save capitalism. In some "straight talking" and lucid exposition he shows how anomalous has been the post-war position of the United States, erected suddenly and for the first time into the front rank of the world's creditor nations — inexperienced in the responsibilities thereby entailed; confronted by an exceptionally delicate situation of world economic interdependence and financial interlacing; insisting obdurately upon the "sanctity of the bond" in debts running to itself and of exemption from any concern for debts running to its creditors, whatever the character or extent of either; initiating and stubbornly maintaining drastic barriers to international trade through the abatement of which alone lay any possibility of reconstructing the world economy and liquidating the legacy of the war; and, finally, extending loans from its mounting (partly "paper") surplus with matchless indiscretion. It is in sober truth an indictment to give pause. There are many passages in this concluding chapter one would like to quote. A single sally must suffice. Regarding the separation of Inter-Allied Debts and Reparations: "The attitude of the United States . . . was legally quite unassailable — in the same way as there is no egal connection between the creditors of a bank and the debtors of a bank."[1] The provincialism of the mass of Americans in economic matters must be held to account for all this folly,

9. The true difficulty, of course, *upon this plane*, i.e., in reference to the industrial as distinct from the financial (business) phenomena, is qualitative, not quantitative. It is the fact that the directions of demand (investment as well as consumptive) are "left to chance," caprice and cajolery, whereas the mode of production — the machine technique, involving heavy fixed costs — tends towards repetitive operations upon a continuous flow of standardized goods, which constitutes the real dilemma of capitalistic industry under modern conditions.

1. P. 221.

no less than our misguided leadership. But the book ends upon a not altogether reassuring note of optimism: eventually America will learn.

Of those who diagnose our ills from the long range standpoint, who endeavor really to go to the roots of our predicament, none has exhibited a better focussed historical perspective, a keener analytical power or more discriminating judgment than Professor Jose Ortega, of the University of Madrid, in his book "The Revolt of the Masses." It is impossible to do justice in a brief summary to the roving, biting, "free" play of intelligence displayed on page after page of this book. It not only comes to grips, it seldom loses grip, with the vital forces shaping human destiny. And it is not an irresponsible, dilettantish, "clever," cynical exhibition of intellectual prowess. The author is fully conscious of the stark tragedy confronting mankind and of the imperative necessity of the mastery of the situation by reason. Indeed, this furnishes the key to his main thesis. He contends that the social process is essentially a struggle between two inherently opposite types of people: the masses made up of the vulgar, commonplace, conforming, self-satisfied majority; and the "noble" aristocrats ever aspiring to higher standards, remote goals, creative achievements, individual distinction.

Up to the nineteenth century the masses remained content to leave the direction, or government (not wholly in a political sense), of society to the gifted minority, "gifted" not primarily on account of superior talents, but on account of the will to use their talents in the pursuit of deliberately constituted ends. This submissiveness of the phlegmatic majority was terminated during the course of the nineteenth century, however, by the rise of science, "technicism" and democracy, which together brought such an unparalleled increase in the "plenitude" of life, a fullness not only of economic provisionment but of the spatial and temporal horizons of life in every order of human activity, that for the first time men of all ranks, including the lowest, were freed of that cramping consciousness of scarcity, limitation, dependence which in all ages had insured their abject obeisance to authority.

This release from the ever-present pressure of want, this escape from the sense of impotence and humility, which thrust the masses upward into the forefront of the stage of public life, did not change their essential conservatism, their distrust, even hatred, of any innovation or individual distinction, nevertheless. On the contrary, it exalted vulgarity. It made "being like everyone else" a genuine virtue, and this not only in respect of actions, interests, even in such inconsequential yet significant matters as dress, but above all in respect of ideas.

In these circumstances, current society finds itself in a labyrinth, *i.e.*, on a road that leads nowhere. Modern man feels himself in possession of ample power. But, dominated by the inertia of the masses, the psychosis of vulgarity, he lacks drive, élan. He is not "going anywhere," and he is incapable, in this inert cultural environment, of the decision and determination to go somewhere. Conscious of abundant opportunities, he cannot grasp them and take advantage of them for he has no purpose. He cannot generate a purpose, for that is contrary to the mass tendency. Hence, he cannot choose. He is the victim of inhibition. Each counts himself "as good as the next fellow." Each settles down, therefore, "to have and to hold" the heritage of civilization, which unfortunately cannot even be "held" for long, without advance under leadership. This, then, is our dilemma.

It is not mere casuistry to observe that one of the principal difficulties with this thesis, considered as a basis for social action, is that of drawing the line of demarcation between the aristocrats and the masses. Professor Ortega offers very little help in the solution of this problem. Indeed, his vacillation on this point gives some ground for a suspicion of deliberate obscurantism. He has no illusions, and will suffer none, about the nobility of a hereditary aristocracy. Yet despite numerous and extended arguments addressed to the fallacy and futility of looking to "blood," either blue or purple, for sustained leadership, he leaves the covert impression here and there that it was precisely the hegemony of a class founded upon this "principle" that accounts for the

historical rise of civilization. He regards the scientist, whom he denominates the arch-specialist, as the vulgarest of the vulgar, outside of his chosen specialty; which means, for public life entirely vulgar. The artist, the business man, the professional worker, the technician are all close to the masses, imbibing their hand-me-down sentiments, shabby ideas and stifling inertia. But throughout the book there is a persistent tendency to glorify, to identify with aristocratic leadership "Europe"— whatever that may mean. At times it appears to mean all the polyglot racial stocks inhabiting that distressed continent — outside of Russia! At times it appears to mean Germany, Great Britain, and France, with Spain occasionally thrown in for good measure. At times it comes perilously close to meaning the gentlemen, the current governing classes, of these countries; tho at least we are spared the conventional rubric that the real rulers in the respective countries are the Prussians, the Scots and the Gasconnades. Of one thing only, it appears, can we be certain: there is no use in looking outside of "Europe" for the leadership, and therewith the salvation, of civilization. "New peoples have no ideas." New York and Moscow represent "phenomena of historical camouflage."

In the end, one wonders if this be not a provincialism, in all essential features identical with the narrow nationalism, as represented by fascism, which eventually emerges (in the next to the last chapter) as the author's special *bête noir*. "The fatal frontiers of the actual economics of France, England, Germany are the political frontiers." "The European, checked in his projects, economic, political, intellectual, by the limits of his own country, feels that . . . his vital possibilities are out of proportion to the size of the collective body in which he is enclosed." Perhaps the United States, if only it were worth considering, suffers from the same handicap, tho doubtless not in the same degree.

The formal parallel here between the conclusions of the complacent partisans of economic liberalism, such as Sir

Arthur Salter,[2] and Mr. Hartley Withers[3] with their emphasis on the removal of trade barriers, the abatement of irritating debts, and the restoration of good will should not obscure the incisive differences. Senor Ortega, it is true, shares with these publicists a high appraisal of economic liberalism. But he does not exude that sweet aroma of Victorian unction which indubitably reveals their backward looking perspective. The reason is that he has no faith in democratic nationalism. In present circumstances (technical and cultural) it is impotent to "pioneer," to open up new vistas and ranges of human relationships, in a word, to institutionalize economic liberalism upon a higher plane and in a wider sphere. And this "pioneering," this quest of a new home for economic liberalism in a less confining environment than national states afford, is indispensable, he would say. It has been made necessary by the growth of human power in industry and the expanding scope of trade relations. Law and government, in which are expressed the public life and social interests of people, have not kept pace with, much less afforded direction, regulation and leadership for, the private (economic) life and special interests of men. The historical parallel to the rise of nationalism itself, when local industry and trade were superseded by regional specialization and intermunicipal commerce, inexorably forcing the consolidation of feudal jurisdictions and the establishment of "the king's peace," as shown, for example, by Schmoller, to mention no others, might well have been used, even tho not cited by Ortega, in confirmation of his main contention.

But the question remains, why has democratic nationalism shown itself impotent to pioneer, why the arrested development of law and government and "the public life" of mankind? Senor Ortega's explanation in terms of the inherent incapacity of "the masses," their levelling tendency, their engrossing appetites and atrophied aspirations, while ingeni-

2. Recovery — The Second Effort, Sir Arthur Salter. New York, 1931.

3. Everybody's Business, op. cit. See also: Sir George Paish, The Way to Recovery, New York, 1931.

ous, is not altogether convincing. After all, even tho the masses may have crowded upon the stage of public life, they do not in Western countries, least of all in Russia, play the leading rôles. They nowhere exercise the supreme power as yet, hardly in politics, certainly not in industry. But do they, as Ortega would contend, *prevent* its exercise? Do they stand in the way of the free and spontaneous reaching out for new goals and vital purposes, which is the essence of leadership and the condition of life? Churlishness is not a modern development, nor is the machine technique a more insinuating and pervasive discipline than hierarchical authoritarianism. If the few "on top" escape the prevalent inert obeisance and attain the pinnacle directly or indirectly by forthright predation, the feat is not unique in any historical period.

The suggestion may be proffered that the answer to the profound question of how this institutional disintegration and social drifting, of which the symptoms are today so plainly observable in every Western country, overtook us, runs in another channel, tho perhaps not a far distant or far different one. It may be summarily indicated as the loss of a dominant purpose. Greek life found its adequate justification in the advance of reason; Roman life in the quest of power; medieval life in the glorification of God; modern life in the pursuit of (individual) happiness. The latter purpose has "run out"; it has ceased to afford an adequate *raison d'etre*. It could not, in its very nature, last. Perhaps no single goal could continue indefinitely to supply a compelling urge for human endeavor. But this one was bound to be ephemeral. It was self-centered. For centuries the fatherhood of God and the brotherhood of man, as institutionalized in the medieval church, bound men together in common ties and furnished them the unity and cohesion and purpose without which civilization could not have endured. Gradually the sense of duty, the passion of piety and the respect for authority died out; new worlds were discovered: the Hellenic world, the western hemisphere, the natural world. The

widening horizon called for exploration. Exploration called for enterprise, initiative, self-assertion. Private rights replaced social duties. Freedom replaced authority.

Liberty was not, in that age, a vain and empty bubble. Men died for it. But once caught, like a bubble, it has dissolved into nothing. The individual, stripped of all obligations, naked in a cold, indifferent world, possessing nothing but his hardly won natural rights, and "with no place to go," no place where he can find the security and the genial glow of a large and loyal comradeship, his life one succession of casual "contacts" (the word is his) and desperate defences — this is the modern man. It is scarcely to be wondered that in good fortune he leaps with the alacrity of a monkey from one novelty, fad, obsession to another, nor that in adversity he cowers before the stark reality of his fate, without the courage or resolution to master it. Nor is it surprising that, imbued with these self-regarding habits of thought, absorbed in private rights, and interminably pursuing special interests, nothing but confusion, cross-purposes and conflict should come out of all this energetic action. Wars and depressions are as much integral phases of modern life as are technical efficiency and scientific discovery. "Ruinous competition" is not a peculiar phenomenon in certain special fields of industry. The phrase has a wider application and a deeper meaning than was imagined by the economists who originated it, still harboring the illusion of the "divinely implanted" general harmony of social interests and individual urgings. Equally, no patriot for a moment supposes that the "manifest destiny" of his particular fatherland works otherwise than towards the blessed consummation of "peace on earth." Yet "ruinous competition" is as certain from patriotism and sovereignty as from business enterprise and private property. War is not the outcome of bellicose nationalism, any more than depression is the result of malice and cupidity in trade. War is simply the outcome of nationalism, depression simply the outcome of capitalism, in the modern, mechanized, interdependent economic environment.

In the deepest sense, then, the whole range of institutions

of a society founded upon "rights" and freedom has become moribund, even as five centuries ago the whole range of institutions of a society founded upon "duties" and authority became obsolete. In both cases, the general run of institutions reached a pass where they were incapable, in the new environment of which they had through centuries themselves helped to germinate the seeds, of furnishing an adequate stimulus and effective coördination to men's efforts. What the outlines of the society of the future may be, no man can know. But he who has a discerning eye upon the exigencies of the new environment created by machines and the mastery of the incalculable energy of nature can not fail to perceive that it will be based upon a synthesis of "duties" and "rights" in functions, and a synthesis of "authority" and "freedom" in coöperation. Its parts will be bound together in a vital whole, not by blind homage, or by bold strategy, but by mutual fidelity. The economics of stewardship may then succeed the economics of enterprise, even as, long after another crisis not less momentous than this, the economics of enterprise succeeded the economics of paternalism.

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HARVEST LABOR IN WESTERN CANADA
AN EPISODE IN ECONOMIC PLANNING

Special interest is being shown today in all actual experiments in economic planning. It is worth while, therefore, to consider rather carefully the results of the recent ten year episode in direct economic planning under governmental initiative in connection with the harvest labor problem of the three Canadian Prairie Provinces.

Here, as in other pioneer agricultural regions, the scarcity of labor was the major limiting factor in the development. The specialization in grain growing, in giving rise to a definite harvest peak load, accentuated the problems connected with the labor shortage. During the short harvest season, approximately from the middle of August to the end of October, at least twice as many laborers, and in some areas several times as many, were required as in the general farming operations. The conditions of labor supply were further complicated by the extension of the agricultural development of the country east and west rather than north and south, and the simultaneous ripening of crops over practically the whole region; by the absence of other large industries possessing a potential source of harvesters; and, most of all, by the long distance from the source of additional labor in Eastern Canada.

A partial remedy was found during the early years of the present century through the special harvest excursions from Eastern Canada introduced by the railways in 1896. Since a large proportion of the railways' annual business consisted in moving the western grain, it was to their interest that the crop should be satisfactorily harvested. They also were actuated, no doubt, by the desire to promote colonization, especially since they had acquired large land grants from the government. While these annual harvest excursions did suffice to alleviate the pressing seasonal situation, they left much to be desired in effectively meeting the settlers' harvest

requirements. The lack of any careful attempt to ascertain the harvest demand or to distribute the imported labor supply from Eastern Canada frequently led to gross maladjustments causing severe hardships. Farmers in some regions often clamored for help while laborers in other overmanned areas wandered about in search of employment. As the crop acreage increased and other industries with similar seasonal activity developed, such as mining and building, the labor conditions at the most critical stage in the agricultural crop year grew worse. Private employment agencies tried to aid, but they were relatively ineffective in the face of the magnitude of the task. The Provincial Governments, altho they did attempt to assist in placing the harvesters where they were most needed, were unable to accomplish much. It was not until during the war period, with the increased importance of food, the serious diminution in the available labor supply, and the bumper crop of 1915, when the wheat production of the Prairie Provinces more than doubled that of the preceding year, that the Federal Government was led to take definite action concerning the harvest labor situation in Western Canada. A policy was adopted of releasing men in the military training camps to assist in garnering the western grain. Once the governmental authorities had taken definite action, the way was open after the war for a much more elaborate and systematic attempt at public regulation and control.

The Federal Government, when undertaking, in 1920, the handling of the harvest labor problem, was confronted by the complicating conditions common to all labor markets. The task of successfully coördinating demand and supply on an extensive scale was not easy. A division of responsibility was essential, particularly in connection with transportation. The railways agreed to transport the harvesters at reduced rates, and also to coöperate in obtaining most of the additional labor supply. The presence of a national net-work of Government Employment Offices established in 1918 greatly facilitated the work of estimating the annual requirements and of creating a rational distribution of harvesters on the prairie

grain fields. There were twenty of these Employment Offices located at important centers in the Prairie Provinces in 1920.[1]

The initial task each season was that of ascertaining the extent of the demand for outside help during the harvest period. It involved two considerations: first, the total number of additional harvesters required, and second, the number of these available locally. The first was based on a knowledge of the crop acreage and of the growing conditions, obtained largely from reports of farmers and crop correspondents in all of the grain growing sections of the Prairie Provinces. The great variations in weather constituted the chief disturbing element. Moreover, the climatic fluctuations made the figures for past years of little value in estimating the current needs. Allowance had to be made for the progress in the mechanization of agriculture. The introduction of the combine, altho not significant until later in the period, and the change from stack to stook or shock threshing, thereby reducing the number of times the grain had to be handled, were but two ways in which improvements in agricultural practices led to a gradual reduction in the harvest labor demand. From the final estimate of the total demand for harvest help the number of regular farm laborers was subtracted — including the operators, their sons and permanent hired laborers. The resulting figure then gave the total number of additional harvest laborers required. The second consideration was that of estimating the number of additional laborers who were available for harvesting locally. The industrial labor statistics furnished a rough basis for arriving at the number of unemployed laborers who might be counted upon as a potential supply of harvest help. In addition there was always an indeterminate number of transient or casual laborers who roamed or "rode the rods" at will over the prairies, staying at one place until they tired of their job or felt the urge to move. They were never numerous enough, however, to be considered a very significant element in the harvest labor supply in Western Canada. When the latter

1. The Labour Gazette, Ottawa, January 1920.

estimate was made it was subtracted from the former, thus giving the number of harvest laborers required to be brought in from outside points.

The above estimates were drawn up for each of the three provinces. Some two or three weeks before the commencement of harvest operations a special meeting, attended by representatives of the Employment Service, the railways, and other interested parties, was held each year in Winnipeg in order that the various provincial estimates might be pooled and the dates on which the harvesters should arrive from outside points might be set. The estimates of the total number of additional harvest laborers required, the number available locally, and the number to be brought in from outside the Prairie Provinces for the years 1920 to 1929 are given in Table I. The increase in the number available locally in 1927 and the following years is clearly shown by the percentage figures in column 4 of the table.

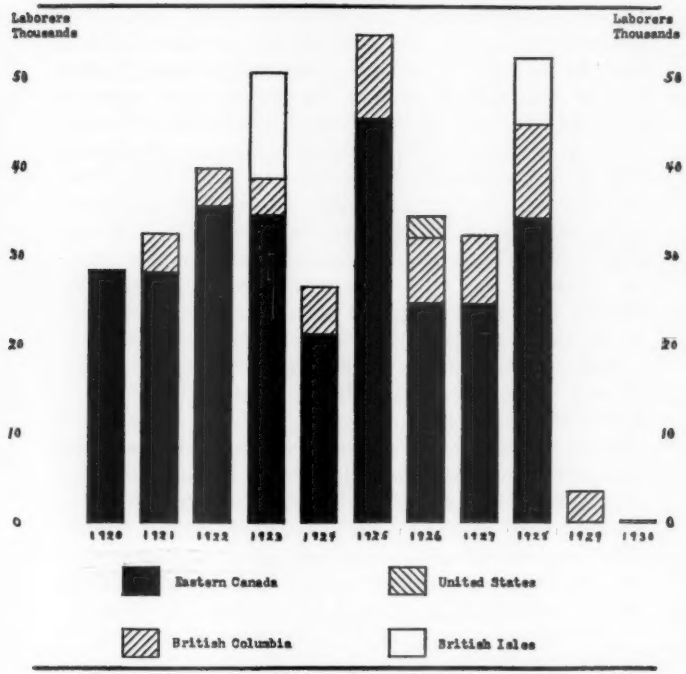
TABLE I. ESTIMATES OF HARVEST LABORERS REQUIRED IN THE PRAIRIE PROVINCES, 1920–1929[1]

Year (1)	Total Number Required (2)	Number Available Locally (3)	Percentage of Total Number Required (4)	Number to be Brought In (5)	Percentage of Total Number Required (6)
1920	41,000	11,000	26.8	30,000	73.2
1921	44,000	9,000	20.4	35,000	79.6
1922	48,000	7,000	14.6	41,000	85.4
1923	61,000	9,000	14.7	52,000	85.3
1924	37,000	13,000	35.2	24,000	64.8
1925	69,000	13,000	18.9	56,000	81.1
1926	69,000	12,000	17.4	57,000	82.6
1927	67,000	36,000	53.7	31,000	46.3
1928	75,000	25,000	33.3	50,000	66.7
1929	30,000	23,000	76.7	7,000	23.3

[1] Data from the Department of Labour, Ottawa.

There were four sources from which the harvest laborers were drawn, namely: Eastern Canada, British Columbia, the United States, and the British Isles. The numbers brought

HARVEST LABORERS BROUGHT INTO THE PRAIRIE PROVINCE FROM OUTSIDE SOURCES, 1920–1930



in annually from these sources, from 1920 to 1930, are shown in the accompanying chart. By far the largest number were brought from Eastern Canada. The average annual movement for the period 1920–1928 inclusive was 30,700. On the basis of data supplied by the Manitoba Branch of the Employment Service of Canada for the years 1925 to 1927 it has been found that approximately 60 per cent of the harvest laborers from Eastern Canada were from Ontario, 23 per cent were from Quebec and 17 per cent were from the Maritimes. The average number from British Columbia was much

lower. It amounted to 6,200 for the years 1921 to 1929 inclusive. There was always a number from the United States. In some years when there was a large crop or an apparent shortage of laborers in Canada, the railway officials extended their publicity into the New England States, making it clear that anyone fulfilling the requirements — general fitness to undertake the work which awaited him in Canada — would be eligible to go on the special harvest excursions by presenting himself at the proper time and place. Others from the United States, but not as many as was commonly supposed,[2] crossed the international border directly from Minnesota, North Dakota, and Montana. Special railway excursions were granted for harvesters from border points in the West in 1926 as an emergency measure, because of the failure to obtain as many laborers as anticipated in Eastern Canada. Outside of this single year no records were kept of such arrivals from the United States. In the years when the crop was particularly large, as in 1923 and 1928, the usual reinforcements of auxiliary labor were not sufficient to meet the increased demand. In both these years the harvest labor force was substantially augmented by special excursions from the British Isles. On the first occasion 11,833 and on the second, 8,330 unemployed British workers were transported by the British and Canadian governments in coöperation with the railway and steamship companies.

The figures recorded by the railways of the harvest laborers brought in to the Prairie Provinces from outside sources from 1920 to 1930 and the percentage, in each case, of the total yearly importation are given in Table II. During the later years an increase is indicated in the proportion from British Columbia, while a decrease is indicated from Eastern Canada. In addition to the harvesters specially transported there were undoubtedly others who proceeded to the harvest fields from outside points on their own initiative. The number of such persons was, however, relatively insignificant

2. D. D. Lescohier, Sources of Supply and Conditions of Employment of Harvest Labor in the Wheat Belt, United States Department of Agriculture Bulletin No. 1211, May 1924, p. 21.

until 1929 when the special excursions from Eastern Canada were discontinued. In that year the excess of the harvesters required, see Table I, column 5, over those recruited in British Columbia was taken care of largely by an increase in the number of these transient laborers.

TABLE II. HARVEST LABORERS BROUGHT INTO THE PRAIRIE PROVINCES, 1920–1930[1]

Year (1)	Total Number Brought In (2)	Number from Eastern Canada (3)	Percentage of Total (4)	Number from British Columbia (5)	Percentage of Total (6)	Number from United States (7)	Percentage of Total (8)	Number from British Isles (9)	Percentage of Total (10)
1920	28,228	28,228	100.0	....	....	....	....	....	....
1921	32,426	28,029	86.5	4,397	13.5	....	....	....	....
1922	39,740	35,570	89.6	4,170	10.4	....	....	....	....
1923	50,451	34,599	68.5	4,019	7.9	....	....	11,833	23.6
1924	26,483	21,131	82.7	5,351	17.3	....	....	....	....
1925	54,850	45,379	82.8	9,471	17.2	....	....	....	....
1926	34,202	24,662	72.1	7,336	21.4	2,204	6.5	....	....
1927	32,250	24,547	76.1	7,703	23.9	....	....	....	....
1928	52,225	34,158	65.3	9,737	18.6	....	....	8,330	16.
1929	3,592	....	....	3,592	100.0	....	....	....	....
1930	13	....	....	13	100.0	....	....	....	....

[1] Data from the Department of Labour, Ottawa.

The interest of the railways in the success of the harvest ensured their generous assistance in carefully working out the necessary transportation arrangements. The excursion fares were very moderate, frequently amounting to less than one quarter of the usual fare. The rate from Ontario and Quebec to Winnipeg was $15, from the Maritimes to Winnipeg $20, and from British Columbia to Calgary $10. From Winnipeg and Calgary to the point of destination the rate was ½ cent per mile. Slightly higher rates were charged for returning. No reductions were granted to harvesters as they moved from one place of work to another.

One of the special problems that the railways had to contend with in Eastern Canada was to see that the number of harvesters transported would be adequate, yet not more

than adequate, to meet the requirements of the western farmers. The harvest excursions were given a wide publicity, and there was no way of telling until the last minute how many men would take advantage of the opportunity. A measure of control was exercised, however, by arranging the excursion trains in a definite series. If more men than had been anticipated presented themselves for the earlier trains, some of the remaining trains were cancelled. If fewer men responded than were required, special emergency plans were made to increase the supply. There was only one case of such a shortage, namely in 1926, when the plan of granting special railway rates from United States border points was adopted. As regards the harvesters from British Columbia all such difficulties were overcome because they were sent on the regular trains, and only when a definite call for their services was received at the British Columbia Employment Offices from the corresponding Offices in the Prairie Provinces. The conditions under which the harvesters were brought from the British Isles called for special transportation arrangements[3] which need not be discussed here.

The circumstance that all harvesters from Eastern Canada and the British Isles had to pass through Winnipeg greatly facilitated the problem of working out a rational distribution. Sometime before arriving in Winnipeg in the special harvest trains the men were handed printed information based on the latest requests received from farmers and the various Employment Offices concerning the location, the amount, and the probable wages of the then available work. This information was given out in order to avoid congestion on the arrival of the harvesters in Winnipeg and also to simplify the difficult task of making placements. The harvesters detrained at Winnipeg and proceeded to the Employment Office. Great care was exercised by the officials in making sure that the harvesters were sent to the places where their services were most required. Every consideration was shown to accommodate those who had preferences for certain localities. As far as possible the harvesters were sent on to

3. See The Labour Gazette, Ottawa, August 1928.

their final destination on the same day as they arrived in Winnipeg. Telegraphic communications were established not only between the main Employment Offices, but also with the sub-offices set up temporarily at various railway stations to act as local distributing agencies. In short, a definite attempt was made to keep informed on the nature of the supply and the demand in all sections of the country. As a result, an intelligent coördination was effected not only at beginning but throughout the harvest season.

It is not necessary to present a complete analysis of the distribution of the imported harvesters by provinces. A study of data supplied by the Manitoba Branch of the Employment Service showed that during the years 1920 to 1928 approximately 65 per cent went to Saskatchewan, 25 per cent to Alberta, and 10 per cent to Manitoba.

Once the harvesters arrived at the scene of their labor they were expected to adjust themselves quickly to their tasks. Those who were accustomed to agricultural work found no real difficulty. The remainder, however, many of whom were from clerical and other in-door positions, frequently found the long hours, the cold nights often spent on uncomfortable beds, the sometimes ill-prepared food, the vast acres of stooking which lay before them, and the solitude of their work, sources of irritation not easy to remove.

The high wages paid provided the chief incentive and were for the most part sufficient to evoke a willingness to undergo the hardships. To a large extent the wages were based on custom. Everyone expected the remuneration to be high on the harvest fields. This tradition doubtless dated back to the days when the labor shortage and the competition among the farmers, together with the necessity of doing the work quickly and efficiently, forced wages up to a high level. An estimate of the general wages paid made by the Saskatchewan Branch of the Employment Service ranges from $3.50 to $6.00 per day in 1923 up to from $4.00 to $6.00 in 1929. These rates can not be considered excessive, when it is remembered that the season was short, that the harvesters were paid only for the days they worked, that many had travelled long distances

even if at reduced fares, and finally that the work was long and arduous.

The annual harvest migrations to the Prairie Provinces led to no considerable permanent movements of population. The figures for the number of harvesters reticketed, as shown in Table III, indicate that a very substantial proportion of those originally transported took advantage of the special provisions granted for returning. Each excursionist was given a

TABLE III. HARVEST LABORERS RETICKETED, 1920–1928[1]

	Eastern Canada		British Columbia		British Isles	
Year (1)	Number Reticketed (2)	Percentage of Number Brought In (3)	Number Reticketed[2] (4)	Percentage of Number Brought In[3] (5)	Number Reticketed (6)	Percentage of Number Brought In[4] (7)
1920	22,254	77.8	.....	.....	.....	.....
1921	23,119	82.5	2,802	63.8	.....	.....
1922	26,955	75.8	.....	.....	.....	.....
1923	30,406	88.0	2,963	73.8	2,509	21.2
1924	15,633	74.0	3,077	57.4	.....	.....
1925	36,672	80.8	5,102	53.9	.....	.....
1926	18,576	75.2	2,881	39.4	.....	.....
1927	18,656	76.0	4,146	53.8	.....	.....
1928	25,618	75.2	.....	.....	7,497	90.0

[1] Data from B. Allen, Assistant Economist, Canadian National Railways, Montreal and the Department of Labour, Ottawa.
[2] Information as to the number reticketed from British Columbia in 1922, 1928 and subsequent years was not available.
[3] As might be anticipated, the figures indicate that more harvesters from British Columbia remained than from Eastern Canada.
[4] The high percentage reticketed to the British Isles in 1928 is explained by the fact that the majority of those brought out were miners who had little interest in remaining permanently in Canada.

form which, when properly filled out and signed by a farmer vouching for the fact that the harvester had performed at least thirty days work, enabled him to obtain a reduced fare to his desired destination. While the greater number of those brought in were reticketed, an important minority remained permanently to join the agrarian ranks on the prairies. The vast fields of grain, the fresh invigorating prairie breezes, and the lure of the pioneer life were among the influences which caused many to remain, or to return to the West later. One

could find today sprinkled over the Canadian West many men, prominent in their respective centers, who first saw the prairies as harvest helpers.

By 1929, a combination of several factors made an influx of harvesters from Eastern Canada no longer necessary. The extension of the same factors practically removed the necessity of a similar movement from British Columbia the following year. Since the close of the decade there have been no further excursions for harvesters to the Canadian Prairie Provinces. The influences giving rise to this changed situation were not equally felt in all parts of the territory, but their general effect was such that the local labor force was sufficient to meet the necessary harvest requirements. The presence of an adequate supply was due partly to a decreased demand and partly to an increased supply. The demand for harvest labor had been substantially decreased by the increased use of the combine harvester; by the fall in the selling prices of farm produce, which called for economies of labor wherever possible; and by the movement in some areas towards diversification, which tended to reduce the seasonal nature of farming operations. The lower crop yields from 1929 to 1931 also contributed to the slackening of demand. The supply was augmented by the growing number of unemployed agricultural and industrial workers who were displaced either by technological improvements or the general recession in business activity beginning in 1929; and by the policy, practised to a limited extent, of dove-tailing employment in agriculture and other industries in an attempt to level out seasonal labor fluctuations. For the present, at least, this experiment in large scale economic planning involving the annual importation of an auxiliary labor force is definitely closed. This does not mean, however, that the officials of the Employment Service will cease to remain sensitive to the nature of the local labor supply and responsive to the needs of the grain growers. They may indeed continue to play an important rôle in effecting a rational distribution of harvest labor over the grain fields of the Prairie Provinces.

The episode is not readily appraisable. Certain general conclusions, however, may be suggested. While the policy of deliberate economic planning did not succeed in removing all the former difficulties, it did bring them within the range of manageable limits. The regular and orderly movements of harvest labor throughout the period stand in sharp contrast to the irregular and haphazard movements of the preceding years. The demand and supply of harvest labor were brought into a position which at times closely approximated market equilibrium. Grievances were fewer than formerly, both on the part of the farmers and the laborers. The power delegated to the public agencies was on the whole wisely administered. Such power was particularly valuable when special exigencies called for emergency measures. The coöperation of the railways in granting low return fares made it possible to have a large proportion of the seasonal increase of laborers for harvesting reticketed, and thus did much to prevent the swelling of the unemployed ranks during the winter months in the prairie cities. Another definite result was the introduction of a distinct feeling of social stability. While the plans were not directly aimed at reducing the number of wandering and itinerant workers, they did provide an important check to the growth of the undesirable social conditions so frequently connected with harvesting in many countries. It is not claimed that no mistakes or errors accompanied the planning, but for the period as a whole they were relatively few. One indication of this appears in the fact that no significant changes proved to be necessary in the course of administrating the planning policy. Another indication is clearly seen in the general commendation of the policy by almost all concerned. Whether the harvest labor problem in other countries is susceptible to similar control may be open to question. But it can be definitely asserted, on the basis of the success achieved, that governmental intervention in connection with the harvest labor problem in the Canadian Prairie Provinces was justified.

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VELOCITY OF CIRCULATION OF GOODS

On page 6 of his article "The Statistical Measurement of the 'Velocity of Circulation of Goods,'" in the Quarterly Journal of Economics for November, 1932, Marget has stated that he has argued "in a paper on 'The Definition of the Concept of a Velocity of Circulation of Goods,' published in Economica for November, 1932, and February, 1933, . . . that the proper way of conceiving of the notion of a 'velocity of circulation of goods' is to regard it as being measured by the ratio

$$\frac{\text{Physical volume of sales of goods}}{\text{Physical volume of goods intended for sale.}}$$

In this statement, however, Marget has failed to tell us what concept of velocity he is trying to measure with the above ratio. He has merely identified his "notion of a 'velocity of circulation of goods'" with his ratio and has thereby confused his velocity concept, whatever it may be, with his statistical measure of the concept. In his paper on "The Definition of the Concept of a 'Velocity of Circulation of Goods'" published in Economica for November, 1932, I have not found a formal definition of the concept of velocity which he is trying to measure with his ratio. In fact the article in Economica deals primarily with a discussion of what goods should be included in the above ratio, and what goods should not. In other words the article in Economica discusses alternative definitions of the numerator and denominator of his ratio, not a definition of the concept of velocity which he hopes to measure with the ratio. In the February number of Economica for 1933 Marget has merely continued the discussion which appeared in the November number of the same journal.

Altho I have not discovered that Marget has presented anywhere in his articles a formal definition of the velocity of circulation of goods, nevertheless I believe that he is

using the term "velocity of circulation of goods" in the sense of "turnover of goods." My decision on this point is based on the fact that Marget has sometimes used the term "turnover" in apposition to the term "velocity" as, for example, he has done on page 433 of his article "The Definition of the Concept of a 'Velocity of Circulation of Goods' " in Economica for November, 1932. Marget has there made a statement in which the expression ". . . velocity of circulation, or 'rate of turnover,' . . . " has appeared.

If it is the turnover concept of velocity which Marget is trying to measure statistically with his ratio, the next problem is to discover the exact sense which Marget has ascribed to the turnover concept. I must confess that I have been unable to find anywhere in Marget's article a formal definition of the turnover concept of velocity. In the absence of a formal definition, I have had to depend for an understanding of the exact sense which he has in mind upon the use made of the concept in the context of his articles. I believe that Marget has used the expression "velocity of circulation, or 'rate of turnover' " of goods to denote the "number of times goods exchange hands." At least he has used the terms "velocity" and "turnover" in this sense in footnote 6 on pages 30–31 of his article in the November number of the Quarterly Journal of Economics. The same definition of velocity and turnover also underlies his discussion on pages 448–449 of his article in the November number of Economica.

I do not propose to argue here that Marget ought not try to measure statistically the turnover concept in the sense in which he has made use of the concept in his articles. I shall urge merely that the turnover concept in the sense in which he has used the concept is not significant for purposes of dealing with the price level problem. For price level purposes I find two objections to the use of the turnover concept when the concept is defined in the sense of the "number of times goods exchange hands." In the first place, such a definition of turnover includes the transfer of goods which arises from barter transactions or from the making of gifts. Obviously such transfers of goods are not significant to explain

changes in the general level of prices. The general level of prices can be affected only on condition that goods are transferred in exchange for money.

In the second place, the definition of turnover implied in Marget's articles excludes changes in turnovers which may arise from an acceleration of the industrial process and a resultant increase in the rapidity of circulation of money. For example, assume that the quantity of money in circulation is $100,000 and that the entire $100,000 are exchanged once during a month for 100,000 units of goods produced in the period of one month. Now assume that the speed of the industrial process is increased so that 100,000 units of goods are produced and sold for $100,000 in the first half of the month and that the process is repeated during the second half of the month. In other words the number of times that a quantity of money, $100,000, is exchanged for a quantity of goods, 100,000 units, during the month is two. According to Marget's concept of turnover, however, there is no change in the turnover of goods in the two hypothetical illustrations. During the first month the 100,000 units of goods produced during that month exchange hands once and therefore, according to Marget's implied definition, have a turnover of one. During the second month the 200,000 units of goods produced during that month also exchange hands once and therefore, according to Marget's implied definition, also have a turnover of one. But such treatment of turnover is not permissible if the purpose of study is to explain changes in the general level of prices. On the basis of the assumed facts 200,000 units of goods are not exchanged once for $100,000 during the second month; on the contrary, a quantity of 100,000 units of goods is exchanged twice during the month for a quantity of $100,000 which is also exchanged twice. On the basis of Marget's implied definition of turnover he would have created a situation in which 200,000 units of goods are turned over once for money during the month and $100,000 are turned over twice for goods during the same period.

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